

BAROID INDUSTRIAL DRILLING PRODUCTS

PRODUCT TRADE NAME	FUNCTION	PRODUCT DESCRIPTION	● PRIMARY FUNCTION ○ SECONDARY FUNCTION												Recommended Treatment			
			NSF Certification	Water Well / Geothermal Well Dev. & Rehab.	Air-Foam Drilling	Grouting & Plugging	Horizontal Dir. Drilg.	Mineral Exploration	Drilled Shafts & Foundations	Slurry Wall Trenches	Tunneling	Monitor Holes / Geotech	Remediation Wells	Soil Stabilization			Pond Sealing	
			U.S. Standard Units	SI - Metric Units														
AQF-2™	Foaming Agent	High expansion, liquid surfactant blend, with high flash point	●	●	●	○	●	○	○	○	○	○	○	○	○	○	2-4 quarts/100 gallons	5-10 liters/m ³
AQUA-CLEAR® AE	Bacteria slime remover	Liquid blend of acids and acid enhancers	●	●	●	○	○	○	○	○	○	○	○	○	○	○	Refer to Product Data Sheet	Refer to Product Data Sheet
AQUA-CLEAR® MGA	Scale remover	Granular acid and additives	●	●	●	○	○	○	○	○	○	○	○	○	○	○	Refer to Product Data Sheet	Refer to Product Data Sheet
AQUA-CLEAR® PFD	Dispersant	Liquid polymer dispersant	●	●	●	○	○	○	○	○	○	○	○	○	○	○	1 gal/500 gallons water	2 liters/m ³
AQUA-CLEAR® PFD DRY	Dry dispersant/thinner	Powdered phosphate-free dispersant/thinner	●	●	●	○	○	○	○	○	○	○	○	○	○	○	Refer to Product Data Sheet	Refer to Product Data Sheet ³
AQUAGEL®	Gellant / viscosifier	Treated sodium montmorillonite (Sodium bentonite - 200 mesh)	●	○	○	○	○	○	○	○	○	○	○	○	○	○	20-50 lb/100 gallons	24-60 kg/m ³
AQUAGEL GOLD SEAL®	Gellant / viscosifier	Sodium bentonite (untreated - 200 mesh)	●	●	○	○	○	○	○	○	○	○	○	○	○	○	20-50 lb/100 gallons	24-60 kg/m ³
AQUAGUARD®	Subsurface grouting material	One-sack sodium bentonite grout (granular - 30 mesh)	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1 sack/14 gallons freshwater	22.7 kg/53 liters freshwater
BAROID® BENTONITE PELLETS	Sealing and plugging agent	Sodium bentonite pellets (untreated - 1/4", 3/8", 1/2")	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1 pail fills 0.7 ft ³	22.7 kg pail fills 0.02 m ³
BAROTHERM® GOLD	Thermally conductive grout	Two part bentonite - sand mixture	●	●	○	○	○	○	○	○	○	○	○	○	○	○	Refer to Product Data Sheet	Refer to Product Data Sheet
BENSEAL®	Sealing and plugging agent	Coarse ground, granular sodium bentonite (8 mesh)	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1 sack fills 0.7 ft ³	22.7 kg pail fills 0.02 m ³
BENSEAL® / EZ MUD® Slurry	Sealing and plugging system	Polymer treated sodium bentonite grouting system	●	●	○	○	○	○	○	○	○	○	○	○	○	○	Refer to Product Data Sheet	Refer to Product Data Sheet
BIO-BORE™	Horizontal directional drilling fluid concentrate	Clay-free, biodegradable drilling fluid	○	○	○	○	○	○	○	○	○	○	○	○	○	○	20-35 lb/100 gallons	24-42 kg/m ³
BORE-GEL®	Horizontal boring fluid	One-sack boring fluid system for use in HDD	●	●	○	○	○	○	○	○	○	○	○	○	○	○	25-50 lb/100 gallons	30-60 kg/m ³
BORE-GROUT®	Horizontal heat loop grout	Bentonite based thermal grout	●	○	○	○	○	○	○	○	○	○	○	○	○	○	Refer to Product Data Sheet	Refer to Product Data Sheet
CASING SEAL™	Sealing and plugging agent	Granular sodium bentonite (10 - 12 mesh)	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1 sack fills 0.7 ft ³	22.7 kg sack fills 0.02 m ³
CON DET®	Wetting agent	Water soluble surfactant blend	○	●	○	○	○	○	○	○	○	○	○	○	○	○	1-4 quarts/100 gallons	2.5-10.0 liters/m ³
DIAMOND SEAL®	Lost circulation material for use in HDD	Water-swellable crystalline dry polymer	○	○	○	○	○	○	○	○	○	○	○	○	○	○	10-20 lb/100 gallons	12-24 kg/m ³
EZ-MUD®	Borehole stabilizer / viscosifier	PHPA liquid polymer emulsion	●	●	●	○	○	○	○	○	○	○	○	○	○	○	1-2 quarts/100 gallons	2.5-5.0 liters/m ³
EZ-MUD® DP	Viscosifier / borehole stabilizer	PHPA dry polymer	●	●	○	○	○	○	○	○	○	○	○	○	○	○	0.5-1.5 lb/100 gallons	0.6-1.8 kg/m ³
EZ-MUD® GOLD	Clay / shale stabilizer	Dispersible, low viscosity, PHPA dry polymer	●	●	○	○	○	○	○	○	○	○	○	○	○	○	0.25-0.75 lb/100 gallons	0.3-0.9 kg/m ³
EZ-MUD® PLUS	Viscosifier / borehole stabilizer	PHPA liquid polymer emulsion (high molecular weight)	●	●	○	○	○	○	○	○	○	○	○	○	○	○	0.5-1 quart/100 gallons	1.25-2.5 liters/m ³
EZ-SEAL®	Grouting and plugging material	One-sack coated granular sodium bentonite grouting material	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1 sack/24 gallons freshwater	22.7 kg/91 liters freshwater
HOLEPLUG®	Sealing and plugging agent	Sized-graded sodium bentonite (3/8", 3/4")	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1 sack fills 0.7 ft ³	22.7 kg sack fills 0.02 m ³
NO-SAG®	Suspension enhancer	Biopolymer additive for enhancing carrying capacity of fluid	○	○	○	○	○	○	○	○	○	○	○	○	○	○	0.5-1.0 lb/100 gallons	0.6-1.2 kg/m ³
N-SEAL™	Lost circulation material	Acid soluble lost circulation material	●	●	○	○	○	○	○	○	○	○	○	○	○	○	5-30 lb/100 gallons	6-36 kg/m ³
PENETROL®	Rate of Penetration Enhancer	Water miscible proprietary blend of surfactants	○	●	○	○	○	○	○	○	○	○	○	○	○	○	0.5-2 quarts/100 gallons	2.5-5.0 liters/m ³
POLY-BORE™	Borehole stabilizing agent	PHPA dry polymer (high molecular weight)	●	●	○	○	○	○	○	○	○	○	○	○	○	○	0.5-1 lb/100 gallons	0.6-1.2 kg/m ³
QUIK-FOAM®	Foaming Agent	High expansion, biodegradable liquid surfactant blend	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1-4 quarts/100 gallons	2.5-10.0 liters/m ³
QUIK-GEL®	High-yield gellant / viscosifier	High-yield treated bentonite	●	●	○	○	○	○	○	○	○	○	○	○	○	○	15-40 lb/100 gallons	18-48 kg/m ³
QUIK-GEL GOLD®	High-yield gellant / viscosifier	High-yield treated bentonite, optimized grind size	●	●	○	○	○	○	○	○	○	○	○	○	○	○	15-40 lb/100 gallons	18-48 kg/m ³
QUIK-GROUT®	Subsurface grouting material	One-sack sodium bentonite grout (granular)	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1 sack/24 gallons freshwater	22.7 kg/91 liters freshwater
QUIK-MUD® GOLD	Clay / shale stabilizer	Low viscosity, PHPA dry polymer	●	●	○	○	○	○	○	○	○	○	○	○	○	○	0.25-0.75 lb/100 gallons	0.3-0.9 kg/m ³
QUIK-TROL® GOLD	Filtration control / viscosifier	Dry modified cellulosic polymer	●	●	○	○	○	○	○	○	○	○	○	○	○	○	0.5-1 lb/100 gallons	0.6-1.2 kg/m ³
QUIK-TROL® GOLD LV	Filtration control	Low viscosity dry cellulosic polymer	●	●	○	○	○	○	○	○	○	○	○	○	○	○	1.0-2.0 lb/100 gallons	1.2-2.4 kg/m ³

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SUPPLEMENTAL AND SPECIALTY PRODUCTS

PRODUCT NAME	FUNCTION
AQUA-GROUT®	Sealing and plugging system
BARA-DEFOAM® 500	Defoamer
BARAFLOC®	Flocculant
BARAFOS®	Thinner and dispersant
BARAD-381™	Cement flow property modifier
BAROID® 41	Weighting material
BAROID® GRANULAR 30 MESH	Sealing and plugging agent
BAROLIFT®	Hole cleaning/suspension aid
BAROTHERM® MAX	Thermally conductive grout with ranges 1.1-1.6
Bicarbonate of Soda	pH Buffer
CORE-LUBE™	Diamond core drill rod lubricant
DEXTRID® LT	Filtration control agent
Drilling Paper	Lost circulation material
EP MUDLUBE®	Extreme pressure lubricant
FLOCELT™	Lost circulation material
FUSE-IT®	Lost circulation material
HOLEBLOK®	Sealing and plugging agent
IDP-533®	Torque reducer
LIQUI-TROL™	Filtration control / viscosifier
LUBRA-BEADS®	Spherical solid lubricant
NXS-LUBE®	Extreme pressure lubricant
PAC-L™	Filtration control agent
PAC-R™	Filtration control agent/Viscosifier
Pel Plug	Coated bentonite pellet, sealing and plugging agent
QUIK MUD® D-50	PHPA liquid polymer viscofier
SHUR-GEL®	Temporary abandonment fluid
Soda Ash	pH adjustment/Water softener
SYSTEM FLOC-360®	Flocculant/fluid disposal aid
TUNNEL GEL® SW	Salt water drilling fluid
ZEOGEL®	Saltwater gellant/viscosifier

FOR FURTHER INFORMATION, INDIVIDUAL PRODUCT DATA SHEETS, M.S.D.S. OR TECHNICAL SERVICE CONTACT:

BAROID INDUSTRIAL DRILLING PRODUCTS

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Our operating philosophy of combining quality products with the best in wellsite services has made us a worldwide industry leader. Our goal is to remain so by working together with our customers to successfully meet their drilling challenges.



BAROID INDUSTRIAL DRILLING PRODUCTS

Performance Products and Comprehensive Services for Industrial Drilling Applications.

Since 1926, Baroid Fluid Services has been recognized as an industry leader supplying drilling fluids to meet a broad spectrum of drilling applications. Today, Baroid's product line has grown to include virtually all products used by the industrial driller.

Baroid Industrial Drilling Products, product service line, Halliburton is an international network of sales and service engineers, laboratory scientists, and support personnel dedicated to servicing all facets of the non-oil well drilling industries. Since the 1950s, products and services have been expanded to include all types of drilling. Baroid Industrial Drilling Products now supplies a comprehensive line of drilling, grouting, plugging, abandonment, and well rehabilitation and development products specifically engineered to optimize performance and end-user costs.

Backed by the strength of Halliburton's worldwide distribution network, extensive quality control from the mine site to the package, and a dedicated research and development laboratory, Baroid Industrial Drilling Products is a manufacturer and supplier dedicated to surpassing customers' needs. The comprehensive Baroid IDP product line guarantees improved drilling performance and superior expertise in wellsite service.

PRODUCT LINES

- Bentonite clays
- Attapulgite clays (for salt water drilling)
- Dry and liquid polymers
- Performance additives (thinner/dispersants, defloculants)
- Water impedance products
- Surfactants and foaming agents
- Grouting, sealing and hole plugging – systems and individual products
- Foam deflaters
- One-sack products to facilitate usage and minimize product costs
- Other specialty products for lubrication, cleaning and equipment maintenance
- Miscellaneous specialty and support products

SUPPORT FOR DRILLING SYSTEMS

- Cable tool
- Rotary, direct circulation
- Rotary, reverse circulation
- Rotary, air-foam
- Rotary, air hammer
- Auger
- Diamond coring

DRILLING INDUSTRIES AND MARKETS SERVED BY BAROID IDP

- Water well
- Mineral exploration
- Horizontal directional drilling
- Tunneling
- Construction foundation/drilled shaft
- Pipe bursting
- Micro tunneling
- Auger boring
- Geotechnical investigations
- Geothermal (ground source heat loop)
- Environmental monitor wells
- Environmental horizontal drainage/recovery wells
- Shot hole drilling
- Water impedance and pond sealing
- Pipe line river crossings

CAPABILITIES

- Dedicated research and development laboratories.
- Quality assured, regulatory acceptable products considered as standards of the industry. Manufactured to meet recognized specifications API, ASTM, NSF and UL; as well as Baroid Industrial Drilling Products' own exacting standards.
- Leaders in drilling and grouting technology. Locally available technical service engineers averaging over 20 years of hands on experience in every facet of the drilling industry.
- Nationally recognized training center – also field-training seminars.
- In North America over 400 stocking distributor locations. International distribution through company owned facilities and foreign affiliates.

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PERFORMANCE PRODUCTS AND COMPREHENSIVE SERVICES FOR INDUSTRIAL DRILLING APPLICATIONS