



Polycell SPA CJSC



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

REACTANTS AND MATERIALS FOR WATER-BASED DRILL FLUIDS

Stabilizing reactants, filtration adjusters, and adjusters of rheological properties

- Smolopolymer Additive for Drill Fluids
- PolyTSCHR Reactant for Drill Fluids
- PolyRGM Lignitic Material for Drilling Fluids
- PolyKR Starchy Reactants
- Low- and High-Viscosity Polyanionic Cellulose (PAC)
- Low- and High-Molecular PAA Polymers
- Ferrolignosulfonate (FLSF)
- Ferrochrome Lignosulfonate (FCLS)
- Carboxymethylcellulose of different viscosity CMC-9N, CMC-9S, CMC-9V
- Bioxan Biopolymer
- CMC-TS Thermal and Salt Resistant Reactant

Lubricating Additives

- SMEG Lubricating Additives for Drill Fluids
- Sealange Lubricant Additive for Drill Fluids
- Polyecolub Lubricant Additive for Drill Fluids
- Mican-40 Multifunctional Kubricant Additive for Drill Fluids

Clay Inhibitors

- Polyteks Complex Reactant
- Polyecosil
- Polyecol

Foam Suppressants

- Polyfosfom
- Polydefomer
- Polydefom
- Polydefolub

Weighting Additives

Marbled (MR), Sideritic (SB), Barytic (BK), and Galena (GK) Weighting Additives

Sulfurated Hydrogen Neutralizers

PRZ-SBM, SMN-SBM, JS-SBM

Compound for Making Heavy Fluids

PolySTJ

SPECIAL PURPOSE REACTANTS



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Betonol Lubricant for Chill Moulds
PolyPP
PolyKR-D Starchy Reactants
Polypron
KPSS Colloidal Polymeric Dry Mixes
Polyfob Water-Repelling Agent

WATERPROOFING AND BRIDGING MATERIALS

Polymeric Compounds

Polygel KSM Gel-Forming Reactant
Polyexpan Gel-Forming Reactant
Polyblock Water Shutoff and Colmatating Reactant

Colmatants

PolyTGP-S Dry Grouting Mixture
Polyplag Filling Reactants for Drill Fluids
Polyfiltrol Plugging Agent
K, KF, and KF-C Micaceous Colmatants for Drill Fluids

WELL CEMENTING MATERIALS AND REACTANTS

Micronired Cement

Ultracement

Ground Dust-Like Quartz

ZTO-7 Active Mineral Lightweight Additive

Plasticity Additives

Polycem Plast Plasticity Additives to Cement Solutions

Fluid Loss Reducing Agents

Polycem PF Grouting Mix Fluid Loss Reducer
Polycem Gasblock Additive for Decreasing Water and Gas Permeability of Cement Stone

Stabilizing Additives for Lightweight Cements

Polycem Stab Stabilizing Additive for Cements

Expansion Additives

Polyext
Polycem DR

Setting Retarders

Polycem STP Cement Setting and Solidification Retarder



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Compounds for Making Flush Fluids

Polycem SM (Compound for Making Washing Flush Fluid)

Polycem PB (Compound for Making Flush Fluid)

Foam Suppressants

Polycem Defom

Reinforcing Additives

Polycem ARM

NON-AQUEOUS MATERIALS AND REACTANTS

Viscosity controller

Fluid Loss Reducer

Water Repellent

Organobentonite

Emulsifier

Polyemulsan (Compound for Making Drill Emulsions)

DRINKING AND SERVICE WATER PURIFICATION AGENTS

Extra Pure Quartzzy Breakstone and Grits

PRZ Brown Stone (MnO₂) Grits

ABOUT



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Smolopolymer Additive for Drill Fluids

This additive is used for stabilizing process fluids and controlling its filtration properties.

Product Characteristics

Physical appearance	yellow-grey-to-black bulk powder
Weight fraction of oversize product on sieve with 15-mm cells, %, no more than	5,0
Static filtration index, $\text{sm}^3 / 30 \text{ min}$, no more than	5,0
Relative sliding coefficient, no more than	0,7

Principal functions of Smolopolymer in drill fluids:

- efficiently decreases drill mud filtration for all types of process drill fluids;
- controls rheological parameters of drill fluids, including fluids with high solid phase content and density of up to 2200 kg/m^3 ;
- makes drill fluids more stable at increased temperatures of up to $220 \text{ }^\circ\text{C}$ and mineralization with NaCl and K to saturation and with CaCl_2 – to 2%;
- inhibits clay shale;
- displays surface-active, lubricating, and anticorrosive properties.

Processing

Optimal reactant consumption is 5-30 kg per 1 m^3 of drill fluid.

Packing

SMOLOPOLYMER is packed in 20-kg polypropylene bags with polyethylene liners.



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PolyTSCHR Reactant for Drill Fluids

This is a complex reactant for preparing clay-free water-based drill fluids, and it is also used as additive in solution with low clay content. PolyTSCHR is used as stabilizer in processing water-based drill fluids to improve their rheological properties, decrease fluid loss, and improves inhibiting characteristics.

Product Characteristics

Physical appearance	Dark brown-to-black bulk material
Filtration index of 10% reactant water suspension, sm^3 , no more than	10
Hydrogen index pH of 1% reactant water suspension, no less than	9
Oversize product on sieve with 5-mm cells, % wt., no more than	5

Use

PolyTSCHR is used for making water-based drill fluids to cut impermeable rock, saline and clay deposits at common and increased temperatures (up to 150 °C), under aggression of highly mineralized stratum water included.

This reactant is a thinning agent and decreases washing fluid filtration at common and increased temperatures.

As for its effect on properties of washing fluids, PolyTSCHR is similar in many respects to PolyRGM, although the former has lower thinning capacity, better colmataging ability, and has minimal influence on pay bed permeability.

Poly TSCHR has multifunctional properties, it is an intensive peptizer of solid, especially clay phase, an efficient thinning agent, emulsifier, and pH regulation reactant. It decreases water loss of all kinds of drill fluids. Processing with PolyTSCHR also makes clay dispersions less sensible to mineralized stratum water electrolytes.

The addition of 1% of this reactant decreases fluid loss in weighted and mineralized fluid by 50 % or even twofold.

Processing

The amount of PolyTSCHR needed for preparing clay-free drill fluid is 70-100 kg per 1 m^3 of fresh or mineralized water. The consumption rate of PolyTSCHR as added to clay fluid is 10-30 kg per 1 m^3 .

Packing

PolyTSCHR is packed in 20-kg polypropylene bags with polyethylene liners.



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PolyRGM Lignitic Material for Drilling Fluids

This reactant is used as stabilizing agent for processing water-based drill fluids so as to ensure their aggregative and kinetic stability, decrease filtration levels, improve rheological and inhibiting properties of fluids.

With its multifunctional properties, PolyRGM is an intensive peptizer of solid, especially clay phase, it is an efficient thinning agent, emulsifier, and pH regulation reactant. It decreases water loss of fresh and low mineralized solutions. Processing with PolyRGM makes clay dispersions less sensitive to electrolyte fluids, reservoir water, solid phase content, and increases clay capacity of these dispersions.

Product Characteristics

Physical appearance	Dark brown-to-black bulk material
Filtration index of 10% reactant water suspension, sm^3 , no more than	6
Hydrogen index (pH) in 1% reactant water suspension, no less than	9
Oversize product on sieve with 5-mm cells, % wt., no more than	5

Use

Lignitic material is a thinning agent that reduces fluid loss of clay washing fluids at high temperatures. The addition of 1 % of PolyRGM decreases fluid loss in weighted and mineralized fluid by 50 % or even twofold. At the same time, the decrease in viscosity of clay-based drill fluids reaches 40-50 %.

Processing

Reactant consumption is 8-25 kg per 1 m^3 of drill fluid.

Packing

PolyRGM is packed in 25-kg polypropylene bags with polyethylene liners.



PolyKR Starchy Reactants

PolyKR starchy reactants are used in oil and gas drilling and repair technologies. They are efficient drilling mud filtration additives for fresh and mineralized water-based drill fluids.

The range of starchy reactants includes the following products:

PolyKR-F is highly resistant to Ca and Mg salts;

PolyKR-K is a strong thickener;

Product Characteristics

	Grades	
	F	K
Physical appearance	white-to-creamy bulk powder	
Weight fraction of water, %, no more than	10	10
Oversize product on sieve with 1-mm cells, % wt., no more than	5	5
Efficient viscosity of fresh 5.5 % wt. clay suspension processed with 1 % wt. of PolyKR, mPa·s	≤ 20	≥ 20
Efficient viscosity of salt-saturated clay suspension with 4.3 % wt. NaCl, processed with 3 % wt. of PolyKR, mPa·s	≥ 20	≥ 20
Decrease in static filtration of salt-saturated clay suspension with 4.3 % wt. NaCl, processed with 3 % wt. of PolyKR, multiplicity no less than	4	8

Use

PolyKR reactants are easily soluble in fresh seawater and mineralized water.

These reactants allow to control parameters of process fluid at temperatures of up to 100 °C. The optimal technological properties of drill fluids are reached after thermal treatment at 80-90 °C.

Processing

The recommended consumption of PolyKR is ~ 5 – 30 kg на 1 m³ of process fluid.

Packing

PolyKR reactants are packed in 25-kg polypropylene bags with polyethylene liners.



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Low- and High-Viscosity Polyanionic Cellulose (PAC)

PAC-V and PAC-N polyanionic cellulose is used for decreasing filtration of and stabilizing process fluids used in oil and gas well drilling and repairs.

Product Characteristics

Physical appearance	white-to-creamy fibrous or powdery material
Weight fraction of water, %, no more than	10
Rotary viscosity meter spring torsion angle at 600 rpm for water solution with a weight fraction of PAC-N of 1%, degr., no more than	40
Rotary viscosity meter spring torsion angle at 600 rpm for water solution with a weight fraction of PAC-V of 1%, degr., more than	40
Index of static filtration of fresh drill fluid with addition of 0.3 % polymer, $\text{sm}^3/30 \text{ min}$, no more than	8

Use

Polyanionic cellulose is an efficient drilling mud filtration additive for fresh and NaCl-saturated fluids.

PAC-N is used to decrease fluid-loss in drill fluids without changing rheological properties.

PAC-V is used for filtration and viscosity control in drill fluids.

Polyanionic cellulose has better thermal and salt resistance in comparison with standard carboxymethylcellulose.

Processing

Polyanionic cellulose is a universal reactant improving almost all properties of water-based drill fluids. A fluid processed with PAC retains its properties under long-term thermal pressure up to 150 °C. PAC use rates largely depend on solid phase content for the product is prone to adsorption on particle surface.

Reactant consumption is 5-15 kg per 1 m^3 of drill fluid.

Packing

PAC is packed in 20-kg polypropylene bags with polyethylene liners.



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Low- and High-Molecular PAA Polymers

PAA-N and PAA-V polymers are polyacrylamides with low and high molecular weight, respectively. They are used for stabilizing process fluids used in oil and gas well drilling and repairs. In addition, PAA-N is used as filtrate reducer and PAA-V is used as drill fluid thickener and cuttings encapsulant.

Product Characteristics

Physical appearance	White bulk powder
pH of water solution with 0.5 % weight fraction of PAA-N, units, no less than	6
Static filtration index of fresh drill fluid with addition of 0.5 % of PAA-N, $\text{sm}^3/30 \text{ min}$, no more than	10
Rotary viscosity meter spring torsion angle at 600 rpm of water solution with 0.5 % weight fraction of PAA-V, degr., no less than	40

Use

PAA-N is used as dispersing and stabilizing agent in drill fluids and as additive for cement fallback decrease.

PAA-V is used as drilling stabilizer as well as for controlling filtration and rheological properties of drill fluids, reinforcing wellbore walls, and as flocculant for efficient purification of used drill fluids and natural and industrial waste water.

In secondary recovery PAA makes water injected into the bed less mobile, which encourages better oil displacement from porous rock and increases oil production rates.

Processing

PAA-N and PAA-V consumption rates are 5-15 and 1-5 kg per 1 m³ of drill fluid, respectively.

Packing

PAA is supplied as 20-kg lots in polypropylene bags with polyethylene liners



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Ferrolignosulfonate (FLSF)

This reactant is used for thinning water-based clay drill fluids. It ensures viscosity decrease by more than 50 % at temperatures of up to 150 °C.

Product Characteristics

Physical appearance	Light-to-dark brown bulk powder
Weight fraction of water, %, no more than	10
pH index of water solution with FLSF ratio of 1 wt. %, units, no less than	5,0
Thinning index, %, no less than	50,0

Use

FLSF has similar effects on rheological characteristics of drill fluids as FCLS. Unlike the latter reactant, however, FLSF contains no chrome, which allows to use it in environmentally sensible zones.

Processing

FLSF consumption rate is 5-17 kg per 1 m³ of drill fluid.

Packing

FLSF is supplied as 20-kg lots in polypropylene bags with polyethylene liners.



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Ferrochrome Lignosulfonate (FCLS)

This agent is produced for controlling rheological characteristics of process fluids with increased solid phase content, used in well drilling and repairs and used as thermal resistant drilling mud filtration additive.

Product Characteristics

Physical Appearance	Light-to-dark brown bulk powder
Weight fraction of water, %, no more than	10
pH index of water solution of FCLS with concentration of 1 % wt., no less than	3,0
Fluidization factor, %, no less than	50,0

Use

FCLS is an efficient disperser in all systems of drill fluids with alkaline pH. The negatively charged lignosulfonate ion interacts with positively charged clay particle edges and thus prevents clay particle aggregation. The addition of FCLS minimizes high-temperature thickening of clay drill fluids. FCLS ensures secondary control of water loss, it is a good oil disperser and can be an efficient thinning agent at up to.

Processing

In case of fluid temperature and salinity increase FCLS must be added in higher doses.

Reactant consumption is 5-17 kg per 1 m³ of drill fluid.

Packing

FCLS is packed in 20-kg polypropylene bags with polyethylene liners.



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Carboxymethylcellulose of different viscosity CMC-9N, CMC-9S, CMC-9V

CMC is used in oil and gas industry as fluid-loss additive and protective stabilizing colloidal system for clay suspension

Product Characteristics

Physical appearance	white-to-creamy fibrous or powdery material
Weight fraction of water, %, no more than	10
Weight fraction of basic substance in absolutely dry technical product, %, no less than	50
Rotary viscosity meter spring torsion angle at 600 rpm in the water solution of CMC at 25°C,	
for CMC 9N	≤ 30
CMC 9S	30 - 50
CMC 9V	> 50

Use

CMC 9N is used in highly viscous drill fluids with a high specific weight or high solid phase content.
CMC 9V is used in drill fluids with low viscosity or solid phase content and improves solution viscosity in addition to fluid loss control.
The CMC additive is used mainly in fresh and low salinity fluids. .

Processing

Reactant consumption is 5-15 kg per 1 m³ of drill fluid.

Packing

CMC additives are supplied as 20-kg lots in polypropylene bags with polyethylene liners.



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Bioxan Biopolymer

Bioxan biopolymer is a highly molecular polymer thickener with high rheological characteristics, it displays strong thickening ability in low amounts, its water solutions display thixotropic and pseudoplastic properties.

Product Characteristics

Physical appearance	white-to-grey bulk powder
Rotary viscosity meter spring torsion angle at 600 rpm, degr., no less than	30
Nonlinearity, no less than	0,45
Shear strength:	
1 min, Pa, no less than	1,5
10 min, Pa, no less than	2,0
Moisture weight fraction, %, no more than	10
Hydrogen index of water solution with 0.5 % weight fraction of Bioxan, pH, no less than	6

Use

Small quantities of Bioxan ensure strong bearing ability of fluids without solid phase and minimal sedimentation of drill slime in static conditions. The biopolymer's thixotropy makes it possible to make drill fluids with exceptionally low solid phase content and excellent volumetric and suspending characteristics. This reactant can be used in most types of water-based fluids in broad pH, mineralization, and temperature ranges, it is compatible with most other reactants for drill fluids.

Bioxan is recommended for use in preparation of fluids for directional and horizontal drilling, sidetracking, and drilling-in. It is efficient in different solutions used in breakdown agents and workover.

Processing

Reactant consumption is 5-15 kg per 1 m³ of drill fluid.

Packing

Bioxan is supplied as 20-kg lots in polypropylene bags with polyethylene liners.



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CMC-TS Thermal and Salt Resistant Reactant

This reactant is used for controlling structural-rheological and filtration indices of all types of water-based drill fluids. KMTS-TS has increased thermal and salt resistance, improved capsulating and inhibiting properties compared to standard CMC.

Product Characteristics

Physical appearance	white-to-creamy fibrous or powdery material
Weight fraction of water, %, no more than	10
Index of static filtration of clay drill fluid with a weight fraction of CMC-TS of 1% after heating at 150 °C for 6 h, sm^3 , no more than	10

Properties

- efficiently regulates water loss of drill fluids;
- imparts optimal structural-rheological characteristics to drill fluids;
- increases thermal resistance of drill fluids to 180 °C;
- makes drill fluids more resistant to mineral aggression.

Processing

Reactant consumption is 5-15 kg per 1 m^3 of drill fluid.



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SMEG Lubricating Additives for Drill Fluids

These are compositions of mineral oil and vegetable-based fluids modified with different admixtures and used as additives in drill process fluids in a broad range of clay phase, weighing materials, and for mineralization.

SMEG additives ensure efficient friction factor decrease and have no negative effect on properties of drill fluids.

These lubricating additives include the following grades with different composition, properties, and fields of application:

- SMEG-2 is for fresh drill fluids;
- SMEG-3 is for fresh and mineralized solutions with average weighting;
- SMEG-5 is for fresh and mineralized solutions with a density of up to 2000 kg/m³ at bottom-hole temperatures of up to +250 °C

Product Characteristics

	SMEG-2	SMEG-3	SMEG-5
Physical appearance	dark-to-light brown fluid		
Relative friction factor, no more than	0,4	0,5	0,5
Relative sliding factor, no more than	0,6	0,6	0,6
Emulsifiability in clay solution	Homogeneous emulsion		
Hardening temperature, °C, no more than	- 20	- 40	- 40

Use

To achieve optimal results SMEG is added to a drill fluid right in the cycle. To achieve the necessary effect, the consumption rate must be 0.5-2%. SMEG is compatible with all drill fluid recipes.

Processing

SMEG optimal consumption rate is 3-10 kg/m³.

Packing

SMEG is supplied as 190-kg lots in metal barrels.



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Sealange Lubricant Additive for Drill Fluids

This additive is used for improving lubricating and anti-wear properties of process fluids during drilling and while preparing the wellbore for casing running.

Product Characteristics

Physical appearance	Light brown bulk product
Relative friction factor at Sealange content of 0.5 % wt., no more than	0,5
Relative sliding factor at Sealange content of 0.5 % wt., no more than	0,6

Properties

- ensures efficient adhesion decrease (twofold-threefold);
- decreases friction factor (1.5-2.5-fold);
- works as corrosion inhibitor;
- has binding effect on clay material;
- has no negative effect on parameters of drill fluids.

Processing

Sealange optimal consumption rate during drilling and preparing the wellbore for casing running is 5-10 and 10-30 kg per 1 m³ of drill fluid, respectively.

Packing

Sealange is packed in 25-kg lots in polypropylene bags with polyethylene liners.



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Polyecolub Lubricant Additive for Drill Fluids

This liquid lubricant additive is a composite material based on natural and synthetic oils. It is used in all types of water-based drill fluids. Polyecolub is not toxic, does not contaminate the environment, and has no negative effect on properties of drill fluids.

Product Characteristics

Physical appearance	Dark-to-light brown fluid
Relative friction factor, no more than	0,5
Emulsifiability in clay solution	Homogeneous emulsion

Use

Polyecolub ensures efficient decrease in adhesion and friction factor. To achieve optimal results, this lubricant is added to the drill fluid right in the cycle.

Processing

Polyecolub optimal consumption rate is 3-10 kg/m³.

Packing

Polyecolub is supplied as 190-kg lots in metal barrels.



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Mican-40 Multifunctional Lubricant Additive for Drill Fluids

This reactant is used to ensure lubricating properties of drill process fluids while preparing the borehole for casing running, and it is also used as antistick additive in drilling. Mican-40 allows to colmatage absorbing rock with pores of less than 100 μm .

Product Characteristics

Physical appearance	grey greasy powder
Relative sliding factor, no more than	0,7
Relative friction factor at additive content of 1 % wt., no more than	0,85

Properties

- ensures more than twofold adhesion decrease;
- decreases friction factor by more than 50 %, alternative to graphite;
- decreases filtration;
- works as colmatant.

Processing

Mican-40 optimal consumption rate for drill fluid processing is 10-30 kg per 1 m^3 .

Packing

The product is packed in 25-kg lots in polypropylene bags with polyethylene liners



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Polyteks Complex Reactant

Polyteks is a composite material based on sodium salts of sulfonated oil bitumen and resins.

Product Characteristics

	dark grey granular powder
Hydrogen index of 2 % water solution, pH, no less than	8
Weight fraction of water soluble matter, %, no less than	80
Filtration of mineralized solution with 3 % Polyteks additive, $\text{sm}^3/30 \text{ min}$, no more than	10

Use

Polyteks is a universal improving additive to drill fluids that stabilizes unstable clay shale strata, prevents them from sloughing, considerably improves lubricating properties of drill fluids, and decreases water loss at high temperatures and pressure. This additive ensures the formation of a thin and reliable filter cake with strong lubricating properties in both, water- and hydrocarbon-based drill fluids.

Processing

Polyteks optimal consumption is 10-30 kg per 1 m^3 of drill fluid. To achieve more efficient processing, the reactant should be preliminarily dissolved in hot water ($> 50 \text{ }^\circ\text{C}$) and use in the form of 15-20% solution.

Packing

Polyteks is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



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Polyecosil

This reactant is a composition based on a complex of rapidly soluble nonorganic silicates.

Product Characteristics

Physical appearance	light grey powder
Hydrogen index of 3 % Polyecosil water solution, pH	10÷11
Filtration index of 5 % Polyecosil water solution, sm ³ /30 min, no more than	5,0
Relative WBF hopper viscosity of 5% water solution, no less than	30

Use

Polyecosil is used for preparing low-clay or clay-free silicate drilling process fluids.

Polyecosil ensures making of silicate drill fluids with optimal rheological, filtration, and lubricating properties for well drilling in gross intervals of highly active clay materials. It also inhibits intensive clay dispersion and excessive production of drill fluid and improves wellbore stability and quality of cement isolation.

Processing

Polyecosil is injected in dry form in low-clay solutions or water at 50-70 kg per 1 m³.

Packing

Polyecosil is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



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Polyecol

Polyecol is a complex-action reactant, it is used to improve inhibiting lubricating and anti-wear properties of process fluids made for oil and gas well drilling and repairs.

Product Characteristics

Physical appearance	Dark brown fluid
Density, kg/m ³	1000 – 1150
Polyecol pH, no less than	8

Properties

Polyecol has the following properties:

- ensures wellbore stability, inhibits clay and clay shale swelling and destruction;
- decreases shear stress;
- efficiently decreases fluid viscosity.

Processing

Drill fluids with 1 % Polyecol content efficiently (twofold-threefold) decrease viscosity and shear stress of highly viscous clay suspensions and ensure >90% protection of clay shale from swelling and flushing.

Polyecol consumption rate is ~ 10-20 kg per 1 m³ of drill fluid.

Packing

Polyecol is supplied as 200-kg lots in metal barrels.



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Polyfosfom

This powder foam suppressant is used for suppressing foam formed as a result of using lubricant additives based on hydrocarbons and vegetable and mineral oils.

Product Characteristics

Physical appearance	White powder or small granules
Weight fraction of < 0.5-mm granules, %, no less than	90
pH of 1% water solution	9.0-10.5

Use

Polyfosfom is added to the drill fluid together with or right after adding the lubricant.

Whatever the lubricant additive concentration in the drill fluid, the optimal consumption rate of Polyfosfom is 0.5–1 kg per 1 m³ of drill fluid.

Packing

Polyfosfom is supplied in 30-kg lots in polypropylene bags with polyethylene liners.



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Polydefomer

Polydefomer is used for inhibiting and suppressing foam formation in moderately weighted mineralized drill process fluids with a density of up to 1500 kg/m³.

Product Characteristics

Physical appearance	Grey emulsion
Foam suppressing ability index* for, %, no less than	95,0
Clay drill fluid	95,0
Drill fluid weighted to $\rho=1500 \text{ kg/m}^3$	90,0
Mineralized drill fluid	

* * When adding 0. 1% wt. of foam suppressant to drill fluid with 5 % wt. of FCLS.

Use

Polydefomer is intended for suppressing foam formed as a result of using lignosulfonate reactants and air-entraining additives during well drilling. This reactant ensures foam suppression by almost 100 % and does not have any considerable effect on parameters of drill fluids.

Processing

Polydefomer optimal consumption rate is ~0,5-1 kg per m³ of drill fluid.

Packing

Polydefomer is supplied as 190-kg lots in metal barrels.



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Polydefom

Polydefom is used for inhibiting and suppressing foam formation in drill and process fluids during oil, condensate, and gas well site construction.

Product Characteristics

Physical appearance	Grey emulsion
Foam suppressing ability index* for, %, no less than:	
Clay drill fluid	95,0
Drill fluid weighted to $\rho=1500 \text{ kg/m}^3$	95,0
Mineralized drill fluid	90,0

* When adding 0. 1% wt. of foam suppressant to drill fluid with 5 % wt. of FCLS.

Use

Polydefom is intended for suppressing foam formed as a result of using lignosulfate reactants and air-entraining additives during well site construction. This reactant suppresses foam formation almost completely and does not have any considerable effect on parameters of drill fluids.

Processing

Polydefom optimal consumption rate is $\sim 0,5-1 \text{ kg per m}^3$ of drill fluid.

Packing

Polydefom is supplied as 190-kg lots in metal barrels.



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Polydefolub

This powder foam suppressant is used for reducing air entrainment in cement solutions and suppressing foam formed in drill fluids with high solid phase content as a result of using lubricant additives based on vegetable and mineral oils and hydrocarbons.

Product Characteristics

Physical appearance	White powder
Weight fraction of < 0.5-mm particles, %, no less than	90

Use

Polydefolub is added to the drill fluid together with or right after adding the lubricant to the fluid.

Whatever the lubricant concentration in the drill fluid, the optimal consumption rate of Polydefolub is 0.5–1 kg per 1 m³ of drill fluid.

Packing

Polydefolub is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



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Marbled (MR), Sideritic (SB), Barytic (BK), and Galena (GK) Weighting Additives

The most bulk materials used in gas and condensate well site construction are weighting additives for drill fluids. The consumption rate of these additives during drifting operation under high formation pressure is 50-250 tons per 100 m³ of drill fluid. That is why, the quality and amount of weighting additives determine the nomenclature and consumption of chemicals, drilling speed, and number of emergencies.

Our company offers you the following kinds of weighting additives for drill fluids of different density and functionality:

- marbled acid soluble weighting additives (MR-1, MR-2, MR-3, MR-4);
- sideritic acid soluble weighting additives (SB-1, SB-2, SB-3);
- barytic weighting additives (KB-3, KB-5, KB-6);
- galena weighting additives (GK-1, GK-2, GK-3).

Product Characteristics

Weighting additives are fine powders that have no abrasive properties and do not react with other components of drill fluids.

Use

These weighting additives allow to achieve different drill fluid density rates, while preserving drilling pump pumpability. Drill fluid density depends on a particular weighting additive:

- when marbled additives (MR-1, 2, 3, 4) is used the density achieved will be up to 1.45 g/sm³;
- when sideritic additives (SB-1, 2, 3) are used the density will be up to 1.6 g/sm³;
- when barytic additives (KB-3, 5, 6) are used the density will be up to 2.4 g/sm³;
- when galena additives (GK-1, 2, 3) are used the density will be up to 3.0 g/sm³ or higher.

Processing

The necessary amount of weighting additive is determined by calculation.

Packing

Weighting additives are packed in 1-m³ one way soft special big bags.



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PRZ-SBM, SMN-SBM, JS-SBM

Sulfurated hydrogen neutralizers are additives used in drill fluids at sulfurated hydrogen content in gas of up to 50% or at oil fluid saturation of up to 5000 mg/l. These additives are compatible with all types of drill fluids and actively interact with H₂S in these fluids to form insoluble compounds and prevent seepage of free H₂S. PRZ-SBM ($\rho = 3.1-3.2 \text{ g/sm}^3$) has high H₂S absorbability and absorption dynamics.

PRZ-SBM ($\rho = 3.1-3.2 \text{ g/sm}^3$) has high H₂S absorbability and absorption dynamics.

SMN-SBM ($\rho = 3.5-3.7 \text{ g/sm}^3$) has high absorbability and high initial H₂S absorption rate.

JS-SBM (ρ up to $4.8-4.9 \text{ g/sm}^3$) has high H₂S absorbability and moderate H₂S absorption dynamics.

Product Characteristics

These additives are light brown-to-dark colour dense fine-grained oil and water insoluble powders.

Use

These neutralizers do not affect the main characteristics of drill fluids, they have certain weighting effect, react with H₂S resulting in formation of insoluble sulfides or elementary sulfur (depending on pH). Thus the highly toxic gas becomes inert.

PRZ-SBM and SMN-SBM are used in low-weighted fluids. JS-SBM is efficient in making heavy “well-killing” fluids for eliminating H₂S emissions.

JS-SBM is successfully used in the Astrakhan oblast.

PRZ-SBM is successfully used in the Urals and West Siberia.

SMN-SBM is used in West Siberia.

Processing

The necessary amount of neutralizer is calculated depending on the expected concentration of H₂S in formation and drilling fluids.

Packing

Sulfurated hydrogen neutralizers are packed in 1-m³ one way soft special big bags.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

PolySTJ

This compound is used for making high-density solutions without solid phase for well completion, penetration, killing, perforation, suspension, and repairs under abnormally high formation pressure (AHFP).

Product Characteristics

Physical appearance	White-to-creamy noncoherent heterogeneous material
Density of PolySTJ solution with 60 % weight fraction, kg/m ³	1500±25
Hydrogen index of POLYSTJ water solution with 60 % weight fraction, pH	7-8

Use

This compound is white or grey free-flowing granuled powder and it is intended for making high-density heavy process fluids (killing, testing, etc.) without solid phase. It is used for drilling in, killing, testing, perforating, and suspending oil and gas wells.

Compared with weighted clay solutions, PolySTJ-based fluids have the following specific properties:

- preserve reservoir features of pay beds and mass flowrate due to zero solid phase;
- increase severalfold the efficiency of installation and repairs of downhole equipment, especially in deep wells;
- considerably decrease preparation expenses (the solution can be made in autonomous conditions right in the well mouth);
- improve surface-active properties of salt liquors, thus retaining reservoir features of pay beds and improving natural reservoir permeability;

Packing

PolySTJ is supplied in 30-35-kg lots in polypropylene bags with polyethylene liners.



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Betonol Lubricant for Chill Moulds

Betonol is used to process chill moulds during production of concrete and reinforced concrete goods. This lubricant is strongly adhesive to chill mould surface and ensures smooth surface of concrete goods, without grease spots.

Characteristics

Physical appearance	Viscous grey-brown fluid
Consistence of working emulsion mixes with 10-20 % of Betonol during 5 days, %, no less than	100
Working mix consumption (in mould coating), g/m ² , no more than	15-20
Hydrogen index of 10% emulsion in use	6-8

Use

Betonol is a paste-like liquid substance that is easily applied to the surface by contusing or spraying under pressure. This lubricant is highly adhesive to chill mould surface and it is applied as a fine evenly thick coating. Betonol can be applied both, hot and cold. It does not peel off during long-time storage and must be mixed only for 1-2 minutes before use.

Betonol ensures efficient separation of reinforced concrete products from concrete form, and it also ensures that concrete products have even and smooth surface without greasy spots that would deteriorate their physical appearance and require material expenses for their elimination.

Betonol prevents and eliminates chill mould corrosion, it is far less expensive than costly oily compounds.

Packing

Betonol is supplied in 190-kg lots in metal barrels or polyethylene containers of up to 1 m³



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PolyPP

PolyPP mudding up reactant is used for breaking clay skins and plugs to restore permeability of pay beds.

Product Characteristics

Physical appearance	White-to-creamy crystal powder or granules
Weight fraction of water, %, no more than	1,5
Pour density, g/sm ³	0,55-0,95

Use

PolyPP is used to ensure intensification of oil inflow from wells the bottomhole area of which is polluted with clay or silicate developments, elimination of drilling tool sticking and restoration of pay beds. This reactant is recommended for use to eliminate colmatation skins formed after drilling on polymer-clay fluid, using dynamic acid bath technologies. It ensures restoration of bottomhole area permeability by destroying the colmatation screen formed from residual drill fluid and swollen clay particles in porous space.

Packing

PolyPP is supplied in 35-kg lots in polypropylene bags with polyethylene liners.



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PolyKR-D Starchy Reactants

PolyKR-D is used in production of fuel bricks and pallets. It can be used in oil and gas well drilling and repairs, too.

Product Characteristics

Physical appearance	White-to-creamy bulk powder
Weight fraction of water, wt. %, no more than	10
Oversize product on sieve with 1-mm cells, wt. %, no more than	5
Efficient viscosity of fresh 5.5 wt. % clay suspension processed with 1 wt. % PolyKR-D, mPa·s	не более 20
Efficient viscosity of NaCl-saturated 4.3 wt. % clay suspension processed with 3 wt. % PolyKR-D, mPa·s	не более 20
Decrease in static filtration of NaCl-saturated 4.3 wt. % clay suspension processed with 3 wt. % PolyKR-D, multiplicity, no less than	2

Use

PolyKR-D has strong adhesive ability and is used as binder in production of coal, peat, and wood powder bricks, granules, and pallets.

It can be used to decrease filtration of water-based fresh and mineralized drill fluids.

PolyKR-D is easily soluble in fresh, sea, and mineralized water.

PolyKR-D does not thicken drill fluids with increase solid phase content.

Processing

PolyKR-D recommended consumption rates are:

5-10 kg (as adhesive binder) per 1 ton of coal powder, peat, wood dust or powder;

~5-30 kg (as reactant for processing water-based drill fluids) per 1 m³ of drill fluid.

Packing

PolyKR reactants are supplied in 25-kg lots in polypropylene bags with polyethylene liners.



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Polypron

Polypron is an additive for drill fluids that is used to efficiently decrease the colmatage of the productive collector drilled using water-based drill fluid systems.

Product Characteristics

Physical appearance	Colorless-to-dark brown viscous fluid
Relative viscosity, s	200-250
Surface tension of drill fluid filtrate, mH/m, no more than	20

Use

Polypron is recommended for use in drill fluid processing during well completion and drilling-in to maintain natural permeability of bottomhole area. The components of the additive make collector pore surface water-repellent and efficiently decrease interphase tension on the boundary between drill fluid filtrate and the hydrocarbon phase of formation fluid.

Polypron has detergent and lubricant effects, stimulates a decrease in clay material hydration speed and level, and helps to maintain natural permeability of pay beds.

Processing

Polypron recommended addition rate is up to 10 kg per 1 m³ of drill fluid.

Packing

Polypron is supplied in 100- or 200-dm³ steel barrels.



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KPSS Colloidal Polymeric Dry Mixes

KPSS are two-component compositions soluble in fresh and mineralized water and used for making colloidal polymeric drill fluids.

Characteristics of KPSS-based Colloidal Polymeric Fluids

Density, kg/m ³	1030 – 1440
Relative viscosity, s	30 – 80
Filtration, sm ³ /30 min	2,0 – 5,0 ≤ 10,0
Shear strength(ShSt1/10), Pa	0/0 – 3/5
pH	6,7 – 7,0
Plastic viscosity, mPa•s	10 - 50
Yield point, Pa	3,0 – 14,0

Use

KPSS-based colloidal polymeric fluids are used in wellsite construction to open up carbonate deposits, including under abnormally high formation pressure and by sidetracking.

Processing

The KPSS consumption rate recommended for making 1 m³ of drill fluid is 55-75 kg.

Packing

KPSS are supplied in polypropylene bags with two packets: in the main 25 kg of dry colloidal polymer mix are packed, while the smaller one contains the target amount of modifying activation reactant.



Polyfob Water-Repelling Agent

This water organosilicone solution is used for modifying clay drill fluids, endowing different articles and materials with water-repelling properties, and protecting construction materials against moisture and natural atmospheric effects.

On the surface of protected structures Polyfob forms a bleak polyalkyl silicone film firmly bound with the protected material. At the same time, the physical appearance, colour, and structure of the protected material do not change, which allows the structure made from this material to “breathe”, does not clog up the pores and impede evaporation of moisture from the material in summer, and decreases dirt retention on the surface. Polyfob makes materials water-repelling, more freeze- and weather-proof, and protects from fungi and mould overgrowth. Surfaces treated with Polyfob can be covered with oil and other paints.

Characteristics

Physical appearance	Bleak-to-dark brown fluid, sometimes with fine residue
Dry residue weight fraction, %, no less than	25
Alkali weight fraction on NaOH basis, %, no more than	20
Density at 20 °C, kg/m ³	1150-1350

Use

Polyfob is a multipurpose reactant for chemical treatment of drill fluids to improve their structural and mechanical properties during oil and gas well drilling; added to cementing slurry, Polyfob allows to improve the quality of drill fluids, which considerably decreases the consumption of traditional reactants.

This reactant is used to modify clay drill fluids to prevent dispersion and hydration of clay and its pass to drill fluids, and it decreases water inflow from entered formations, decreases and stabilizes viscosity and ensures improved lubricating ability of drill fluids.

After Polyfob is added to cementing slurry, water-repelling film is formed that inhibits fluid thickening, which allows to regulate setting time in a broad range.

Processing

Polyfob consumption rate is 10-20 kg per 1 m³ of drill fluid for treatment of cement solution with 0.1-0.2% of binder (cement) weight.

Packing

Polyfob is supplied in 200-dm³ steel barrels or 30-l polymeric canisters, or it can be packed, on the Customer's request, in the Customer's tare.



Polygel KSM Gel-Forming Reactant

Polygel-KSM is used as blocking agent for absorbing washing process fluids in oil, gas, and condensate well drilling on gas deposits and in underground gas reservoirs.

Product Characteristics

Physical appearance	Component 1 – white Component 2 – grey
Pour density, g/sm ³	1,3-1,5
Hydrogen index of reactant water solution, pH, no more than	3
Weight fraction of water, %, no more than	1,0

Use

Polygel-KSM is a water and gas isolating material used for elimination of complications in oil and gas well drilling, overhaul, and maintenance and repairs in the following cases:

- water horizon shutoff;
- elimination of behind-the-casing fluid movement;
- sealing and reinforcement of destroyed cementing zones;
- bulk water shutoff;
- solidification (gelling) of water lenses and basins in productive structures.

Polygel-KSM consists of two dry powdery components (supplied in separate packs). Both components are consistently mixed and suspended in water (at ratios of 1:3 - 1:4) at 20-40 °C for 2-3 hours. For 6-24 hours (i.e., in controlled time limits) Polygel-KSM exists as mineralized solution with strong penetrating ability.

During solidification of water-containing subsurface lenses and basins this compound is supplied in concentrated form in a water-free carrying agent. When the target reactant-to-water ratio is achieved (1:4), bulky gelling occurs. The resulting gel has good adhesive ability and resistance to attack by aggressive media.

Packing

Polygel-KSM is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



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Polyexpan Gel-Forming Reactant

Polyexpan is used in waterproofing works in wells. It is a blend of polymers and reinforcing and modifying additives.

Product Characteristics

Physical appearance	Light grey bulk powder
Rotary viscosity meter spring torsion angle at 600 rpm of water solution with 0.5 % weight fraction of Polyexpan, degr., no less than	30

Polyexpan can be made as suspension in conveyance fluid

Use

Polyexpan displays strong adhesion to rock surface and starts to form firm gels in the repair works zone in contact with water already in three minutes upon application. The entire process of gel formation lasts for up to 60 minutes. During water shutoff the reactant grows 10-20-fold in volume, which ensures reliable bridging and water shutoff OK.

Processing

Polyexpan average consumption rate is 0.3-0.5 t per operation

Packing

Polyexpan is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



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Polyblock Water Shutoff and Colmatating Reactant

Polyblock is a chemically stitched polymeric material with 0.1-5-mm granules. It has strong particles with hindered water regain.

Product Characteristics

Physical appearance	Yellow-to-brown bulk material
Weight fraction of oversize amount on sieve with 5-mm cells, %, no more than	5,0
Weight fraction of water, %, no more than	5,0

Use

Polyblock is used for eliminating water ingresses and uptakes of washing fluids in oil and gas well building on gas deposits and in underground gas reservoirs.

This reactant can be carried to lost circulation zones both, in clay drill fluids and in hydrocarbon fluids. Filling pores and cracks, granules get swollen and, becoming several times bigger, ensure reliable isolation for the lost circulation zone.

Packing

Polyblock is supplied in 25-30 kg lots in polypropylene bags with polyethylene liners.



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PolyTGP-S Dry Grouting Mixture

PolyTGP-S is used for making grouting compounds for eliminating loss zones in highly permeable cracky and cavern collectors.

Product Characteristics

Physical appearance	Component 1 – grey-to-brown bulk material Component 2 – light yellow crystall powder
Flowability of water suspension with $\rho=1400-1460\text{ kg/m}^3$ along cone KR-1, sm (in range)	17-20
Water yield of water suspension with $\rho=1400-1460\text{ kg/m}^3$, $\text{sm}^3/30\text{ min}$, (in range)	14-20

Use

PolyTGP-S is used for making grouting mixtures by dissolving component -1 in NaCl solution with further addition of component-2.

Upon preparation this grouting compound is pumped to loss zones in highly permeable cracky and cavern collectors, and, after a certain period of time, it irreversibly thickens and reliably eliminates drilling and cement fluid losses.

The amount of grouting compound to be prepared is determined according to the size of a loss zone.

Packing

PolyTGP-S is supplied in 25-kg lots in polypropylene bags with polyethylene liners with calculated amount of component-2.



Polyplag Filling Reactants for Drill Fluids

Polyplag reactants are used to prevent and eliminate drill fluid losses. These preparations consist of fibrous and lamellar organic materials, grain mineral fillers, and natural and synthetic polymeric modifiers, that ensure reliable filling of pores, cracks, and caverns, and accelerated mudding of forming shroud.

Polyplag is evenly distributed in the entire amount of process fluid, it does not rise to the surface or precipitate on the bottom.

Product Characteristics

	Grades of Polyplag			
	1	3	5	10
Pour density, kg/m ³ , no less than	100			
Fibrous fraction content, wt. %, no less than	70			
Weight fraction of oversize amount on sieve (mm), %, no more than:				
1	10	-	-	-
3	-	10	-	-
5	-	-	10	-
10	-	-	-	10
hydrogen index of water suspension at 10 wt. % colmatant content, pH	8,0 – 9,0			
Solubility in 15-% HCl solution, %, no less than	30			

The grain-size composition of the reactant can be changed according to the customer's particular requirements.

Use

Polyplag filling reactants are used to prevent and eliminate loss of circulation while drilling out drained and highly permeable granular and mixed granular crackly collectors, and also for minimizing the possibility of drill stem differential sticking.

These reactants are efficient in plugging permeable beds and have minimal influence on rheological properties of drill fluids.

Unlike mineral colmatant fillers, Polyplag filling reactants have low density, which makes it possible to add them to different lightened drill fluids and foam systems.

Processing

Polyplag consumption rate is ~ 10-30 kg per 1 m³ of drill fluid.



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The recommended consumption rate to prevent loss of circulation and filtration losses is 5-20 kg per m³.

To eliminate already registered losses of circulation, the consumption rate must be increased to 40-60 kg per m³.

Polyplag reactants are used as efficient basic fillers of hi-vis pills (HVP) pumped into the well in the form of blocking units to eliminate losses of circulation.

Packing

Polyplag reactants are supplied in 15-20-kg lots in polypropylene bags with polyethylene liners.



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Polyfiltrol Plugging Agent

Polyfiltrol is a compound based on organic fibers with different nonorganic modifying additives, and it is used for plugging feeding canals in highly permeable, cracky, and cavern collectors, eliminating loss-of-circulation zones and overcurrent canals in cement sheath.

Polyfiltrol is used in well drilling in oil and gas industry.

Product Characteristics

Physical appearance	Grey-to-brown bulk material
Filtration time, s, no more than	300,0

Use

Polyfiltrol is a plugging material used for preventing well collapse and ablation behind casing strings, separating waterbeds and other beds for analysis, crack, empty space, and cavern bridging, eliminating water ingress, and loss of returns during drilling.

Packing

Polyfiltrol is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



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K, KF, and KF-C Micaceous Colmatants for Drill Fluids

Micaceous fillers (colmatants) are used for preventing and eliminating loss of circulation. Polycell SPA CJSC produces colmatants of several grades with modifying additives that ensure reliable filling of pores, cracks, and caverns.

Classification of grades:

KF -0,63, 1, 2, 3, 5, 10, 20 – micaceous colmatants;

KF-1C, 3C, 5C, 10C – micaceous colmatants with modified cellulose fiber;

Granulometric class and types are marked as follows:

KF-1 – 95 % of particles are smaller than 1 mm in size;

KF-5 – 95 % particles are smaller than 5 mm in size.

Product Characteristics

	K-0,63	K-1	K-5	K-10
Pour density, kg/m ³ , no less than	600	600	600	700
Weight fraction of oversize amount on sieve after dry sieving, %, no more than				
10,0 mm	–	–	1,0	5,0
5,0 mm	–	–	4,0	n.a.
1,0 mm	1,0	5,0	n.a.	n.a.
0,63 mm	10,0	n.a.	n.a.	n.a.

Use

Colmatants are used to cope with loss of circulation. The grade to be used is determined according to particular drilling conditions.

Processing

Micaceous colmatants are very efficient as basic fillers of hi-vis pills (HVP) pumped to the well to eliminate loss of circulation.

The standard consumption rate of these reactants is ~ 11 - 17 kg per 1 m³ of drill fluid.

Packing



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Micaceous colmatants are supplied in 30-kg lots in polypropylene bags with polyethylene liners or in 800-kg lots in plastic big bags.



Ultracement

Ultracement is ultrafine (construction, grouting, specialized) cement analogous to Microdur ultrafinely dispersed binder. The grades of ultracement produced and supplied by Polycell SPA CJSC include Ultracement-15, Ultracement-10, Ultracement-7, and Ultracement-5.

Product Characteristics

	Ultracement - 15	Ultracement - 10	Ultracement - 7	Ultracement - 5
Grinding fineness, weight fraction of particles bigger than:				
-15 microns, %, no more than	15	n.a	n.a	n.a
- 10 microns, %, no more than	n.a	10	n.a	n.a
- 7 microns, %, no more than	n.a	n.a	10	n.a
- 5 microns, %, no more than	n.a	n.a	n.a	10
Average particle size, μm , \leq	7.0	5.0	4.0	3.0
Water/cement ratio	0.80	0.95	1.05	1.2
Cement solution density, kg/m^3	1460-1560	1440-1540	1420-1520	1400-1500
44 % cement paste flowability, mm, \geq	300.0	300.0	300.0	300.0
Fluid loss, sm^3 , \leq	2,0	2,0	2,0	2,0
Thickening time at 22 °C, min, \geq	240,0	240,0	240,0	240,0
Cement stone strength on bending at 22°C after 1 day, mPa, \geq	3.0	2.5	2.0	1.5

Use

Ultracement is a plugging material used for removing complications in drilling and maintenance and overhaul repairs of oil and gas wells in the following instances:

- when it is necessary to eliminate behind-the-casing flow in casing annulus;
- when it is necessary to cement highly permeable and low-resistant moistened adjacent strata;
- when it is necessary to recover strength of destroyed cements;
- when it is necessary to ensure vertical and horizontal water proofing of underground facilities;
- when it is necessary to eliminate large empty spaces and caverns (of up to 40÷50 m) using ULKP max devices.

Ultracement is carried to the zone of repairs in the form of water suspension or in a carrying agent (polyglycol, diesel fuel), or it is injected with the help of sliding injectors; at the same time, microcement penetrates thin pores and cracks.



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Microcement suspension is highly mobile and in this respect it is comparable with water even at minimal W/C ratios. In terms of penetrating power this suspension is comparable with disperseless binders.

Depending on the original cement grade, ultracement thickens in a broad range of temperatures, it is resistant to action of aggressive media, and does not have any product shrinkage.

Ultracement ensures considerable advantages when used as additive to packing cement during plug back jobs and casing cementing. If a fraction of 20 % of ultracement is added to the recipe of grouting solution, it will make the solution more stable, considerably increase early cement stone strength and adhesion of cement to metal and geological material even at low temperatures.

Packing

Micronized cement is packed in plastic big bags MKR-1.0S1(2)-1.0-PPR(2) according to ToR 2297-007-21701787-2008, or it can be supplied in capronic big bags at the Customer's discretion.



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Ground Dust-Like Quartz

Ground dust-like quartz produced by Polycell SPA CJSC is a silica additive for cements. Depending on impurity level and grain-size composition, ground quartz can belong to either of the two grades: A or B.

Product Characteristics

	Grade A	Grade B
Weight fraction of SiO ₂ , %, no less than	98,0	98,0
Weight fraction of metallic iron, %, no more than	0,05	0,25
Weight fraction of Fe ₂ O ₃ , %, no more than	0,05	0,15
Weight fraction of Al ₂ O ₃ , %, no more than	0,5	1,0
Weight fraction of CaO, %, no more than	0,05	0,15
Loss on ignition, %	0,1-0,15	0,1-0,2
Weight fraction of moisture, %, no more than	2,0	2,0
Reaction of aqueous extract	Neutral	
Grain-size composition		
Overdue amount on sieve, %, no more than:	1,0	1,0
No. 016	2,5	2,5
No. 010	10,0	10,0
No. 0063	85,0	82,0
Sifting through sieve No. 005, %, no less than		

Sifting through sieve No. 005, %, no less than

Ground dust-like quartz is used as mineral additive at fractions of up to 30 % in grouting and construction cements. It is used as filler to improve cement mixture strength and allows to decrease cement consumption.

Packing

Natural silica materials are supplied in 25-kg lots in polypropylene bags with polyethylene liners or in plastic big bags.



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ZTO-7 Active Mineral Lightweight Additive

ZTO-7 is added to cements to ensure better strength of cement stone and better resistance to aggressive media, at a decrease in cement mix density to 1350 kg/m³.

Product Characteristics

Weight fraction of SiO ₂ ,%, no less than,	75
including active SiO ₂ ,%, no less than	40
Weight fraction of oversize amount on sieve No. 008K,%, no more than	10
Pour density, g/sm ³ , no more than	900
Compressive resistance*, t-criterion, no less than	2,07
Final setting of cement paste* with ZTO-7, days, no more than	7
Water resistance period*, days, no less than	3
Expansion of sample cylinders*, mm, no more than	15
Weight fraction of moisture,%, no more than	10

* These indicators are set once a year according to the Customer's demand.

Use

Natural silica materials are used as active mineral additives at fractions of up to 30 % to grouting and construction cements.

Packing

Natural silica materials are supplied in 25-kg lots in polypropylene bags with polyethylene liners or in plastic big bags.



Polycem Plast Plasticity Additives to Cement Solutions

These are complex additives to cement solutions, based on rationally chosen blends of sodium salts of polymethylene naphthalene sulphoacids with different molecular weights with modifying additives of lignosulphonic acid salts and other organic and nonorganic substances.

Product Characteristics

	Polycem Plast-1		Polycem Plast-2		Polycem Plast-3	
Physical appearance	Light-to-dark obrown powder	Dark brown fluid	Light-to-dark brown powder	Dark brown fluid	Light-to-dark brown powder	Dark brown fluid
Pour density, Pour density,	400±100	-	800±100	-	600±100	-
Density of 30% water solution, kg/m ³	1150±10		1160±10		1170±10	
Weight fraction of water, %, ≤	10	70	10	70	10	70
Hydrogen index of 5% water solution, pH	8,0±1,0		8,0±1,0		8,0±1,0	

Use

Plasticity additives are used in oil, condensate, and gas well cementing as part of grouting solutions to regulate their rheological properties, decrease hydraulic resistance of cement mix pumped in annular space, and weaken squeeze and injection pressure.

These additives can be used in other kinds of concrete and cement mixtures in the production of concrete and reinforced concrete components for civil, industrial, transportation, and other sectors of construction industry

In addition to general grades of plasticizing action, these products are classified according to their extra effects: Polycem Plast-1 — water reducing additive; Polycem Plast-2 — strength improving additive; Polycem Plast-3 — solidification kinetics regulation additive.

Processing

These additives are added to the mortar mix in the form of water solution together with mixing water. Powdery additives are dissolved in water first.

The consumption rates are calculated based on the preliminary determination of the composition of mortar cement mix.



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The recommended dosage is 0.1-0.4% of additive relative to dry cement weight.

Packing

Polycem Plast additives to cement mixes are supplied as powder in 1 m³ plastic big bags or in GOST 17811 polypropylene bags, or they can be supplied in water solution in 200 dm³ steel barrels.

Also, these materials can be supplied in other kinds of tare by agreement with the Customer.



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Polycem PF Grouting Mix Fluid Loss Reducer

Polycem PF is an additive based on sulphonated synthetic polymer, that reduces fluid loss of grouting mixes

Product Characteristics

Product Characteristics	White-to-grey powder
Pour density, kg/m ³	300 — 550
Hydrogen index of water solution with a 1 % weight fraction of Plocem PF, pH	7 - 9

Use

This additive is used in technological casing of oil, condensate, and gas wells for the purpose of an efficient decrease of cement mix filtration.

Processing

The additive is injected in the form of water solution to the mortar mix together with mixing water. The powdery additives are dissolved in water first.

The consumption rate of the additive is determined according to the preliminary selected composition of mortar cement mix.

The recommended dosage is: 0.3-0.5% to dry cement weight to ensure an efficient fluid loss indicator decrease.

Packing

Polycem PF is supplied in 25-kg lots in polypropylene bags with laminated internal layer or in multiwall paper bags with laminated internal layer.



Polycem Gasblock Additive for Decreasing Water and Gas Permeability of Cement Stone

Polycem Gasblock additive is a compound based on synthetic sulphated polymers, that is used for decreasing water and gas permeability of cement stone.

Product Characteristics

Physical appearance	White-to-grey powder
Pour density, kg/m ³	300 — 550
Hydrogen index of water solution with 1 % weight fraction of Polycem, pH	7 - 9

Use

This additive is used in technological casing of oil, condensate, and gas wells for the purpose of efficiently decreasing filtration of cement mix, without any changes in its rheological properties and decrease in cement stone gas and water permeability. This reactant does not retard cementing setting time, remains effective at up to 210 °C, and does not thicken the mix.

The additive is highly resistant to salts of monovalent and polyvalent metals, and efficiently works with salt-saturated cement mixes.

Processing

The additive is injected in the form of water solution to the mortar mix together with mixing water. The powdery additives are dissolved in water first.

The consumption rate of the additive is determined according to the preliminary selected composition of mortar cement mix.

The recommended dosage is: 0.3-0.5% to dry cement weight to ensure an efficient fluid loss indicator decrease, and 0.6-0.8% to dry cement weight to prevent behind-the-casing flow of formation fluid.

Packing

Polycem Gasblock is supplied in 25-kg lots in polypropylene bags with laminated internal layer or in multiwall paper bags with laminated internal layer.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycem Stab Stabilizing Additive for Cements

Polycem Stab is intended for use in processing of cement mixes during well casing to increase their sedimentative resistance, reduce setting time, improve cement stone strength and improve cement stone adhesion to metals and geological materials.

Product Characteristics

Physical appearance	Light yellow-to-light brown powder
Pour density, kg/m ³	800 — 850
Weight fraction of water, %, pH, no more than	5
Water loss of grouting mix with Polycem Stab, sm ³ , no more than	2

Use

This additive is used for cementing oil, condensate, and gas wells at low, moderate, and standard temperatures. The recommended working temperature range is 15-100 °C.

Processing

The recommended dosage is either 0.5-1.0% to dry cement weight for grouting mixes of standard density or up to 2.0% to dry cement weight for lightweight grouting mixes.

Packing

Polycem Stab is supplied in 25-kg lots in polypropylene bags with laminated internal layer or in multiwall paper bags with laminated internal layer.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polyext

Polyext is an expansion additive for grouting and construction cements, that is efficient at low temperatures.

In terms of composition, Polyext is a silica sorbing agent with a special hydrocarbon component (HCC) that decreases the strength of hydrate bonds in cement stone paste and preconditions its expansion.

Three grades on Polyext are produced:

- Polyext-1 - white powder with HCC content of 70 %;
- Polyext-2 – white powder with HCC content of up to 50 %;
- Polyext-3 – grey-yellow powder with HCC content of up to 35%.

Properties

The product does not form dust, cake, or freeze, it is environmentally friendly (belongs to danger category IV).

Processing

Added to cement at a level of up to 5, 8, and 10 %, respectively, Polyext-1, Polyext-2, and Polyext-3 prevent the setting and increase the volume of cement stone to 1.5 %, and improve its physical and mechanical properties.

Packing

Polyext is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycem DR

Polycem DR is a refined mix of special nonorganic elements that control grouting mix setting at solidification and ensure expansion in plastic and solidified state.

Use

Polycem DR is an expansion additive injected in grouting mixes to obtain expanding grouting material. During oil and gas well cementing at up to 50°C the additive increases the linear size of grouting mix cement stone.

Processing

Added to cement at a level of 6-7 %, Polycem DR prevents the setting and improves the volume and water and gas isolating abilities of cement stone.

Packing

Polycem DR is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycem STP Cement Setting and Solidification Retarder

Polycem STP is a composition based on synthetic sulphonated polymers.

Characteristics

Physical appearance	White-yellow powder
Pour density, kg/m ³	400 — 600
Hydrogen index of water solution with Polycem STP weight fraction of 5 %, pH	5,5 — 7,5
Weight fraction of water, %, no more than	7,5

Use

This additive is used in cement mix processing during well casing to retard cement mix setting.

The scope of application of Polycem STP is well cementing at low, standard, moderate, or increased temperatures. The recommended working temperature range is 20-200°C.

Processing

The recommended dosage is 0.1-0.5% to cement weight.

Packing

Polycem STP is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycem SM (Compound for Making Washing Flush Fluid)

Polycem SM is a compound for making washing flush fluid for oil and gas well cementing. This reactant is a concentrated water solution of special surface-active substances and extra additives.

Product Characteristics

Physical appearance	Light-to-dark brown fluid
Compound density, kg/m ³	1300±10
Hydrogen index of water solution with Polycem SM weight fraction of 5%, pH	11,0÷13,5

Use

Polycem SM-based washing fluid is a reliable separating buffer between grouting and drill fluids of different composition and density. It displaces drill fluid from the cementing interval, eliminates clay and hydrocarbon film from wellhole and casing pipe surfaces, and ensures reliable contact of cement stone with contact surfaces. Thus, high-quality well cementing is ensured, well integrity is improved, and possibility of behind-the-casing flow is sharply decreased.

Processing

Washing flush fluid is made by adding a target amount of concentrated Polycem SM to a necessary amount of process water. The optimal consumption rate is 5-10 kg/m³.

Packing

Polycem SM is supplied in new 30-275 dm³ sealed polyethylene capacities (canisters or barrels).



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycem PB (Compound for Making Flush Fluid)

This reactant is a water solution of special surface-active substances, cellulose ethers, plasticizers, and extra additives.

Product Characteristics

Physical appearance	Dark brown fluid
Compound density, kg/m ³	1020÷2300
Funnel viscosity, s	25÷60
Reactant hydrogen index, pH	10,0÷11,5

Use

Polycem PB is used for making flush fluids for the purpose of separating grouting and drill fluids of different composition and density, efficiently displacing drill fluid from the cementing interval, and eliminating clay and hydrocarbon film from the wellbore during oil and gas well cementing.

Polycem PB ensures:

- separation of drill fluid from grouting fluid during cementing;
- possibility of an increase in flush fluid density to 2300 kg/m³;
- avoidance of formation of sedimentative blocks, when flush fluid is mixed with weighted drill fluid, and of penetration of flush fluid filtrate to pay beds;
- efficient displacement of drill fluid from the wellbore;
- pipe surface hydrophilization and improved cement stone-casing contact.

Processing

Washing flush fluid is made by adding a target amount of Polycem PB to a necessary amount of process water. The optimal consumption rate is 5-10 kg/m³.

Packing

Polycem PB is supplied in new 30-275 dm³ sealed polyethylene capacities (canisters or barrels).



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycem Defom

Polycem Defom is a dry powdery foam suppressant for cement grouting mixes.

Characteristics

Physical appearance	White powder
Weight fraction of particles < 0.5 mm, %, no less than	90
Foam suppressing ability with addition of 0.1 wt. % of Polycem Defom to standard cement mix, %, no less than	95

Use

When plasticizing and other modifying agents are added in preparation of cement (esp. lightweight) mixes, it is often accompanied with increased air entrainment, and, henceforth, cement mix density decrease.

Added in dry form to cement mix of low density that results from air entrainment during mixing, Polycem Defom recovers the original mix density.

Processing

Polycem Defom is added to cement mix at 1-2 kg per cubic metre and does not affect its rheological and filtration performance.

Packing

Polycem Defom is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycem ARM

Polycem ARM is a reinforcing additive to cements, that is based on silica minerals with needle-like crystals and optimized grain-size composition.

Product Characteristics

	Polycem ARM-V	Polycem ARM-E
Physical appearance	White powder	Dark green powder
Particle size (thickness), micron	0,5-100	1-315
Length-to-thickness ratio	10:1	3:1
Density, g/sm ³	2,8	3,5
Weight fraction of moisture, %, no more than	10	10

Use

Polycem-ARM is used in grouting and construction cements to improve their strength, crack resistance, and frost resistance. Adding Polycem-ARM makes cement stone more water, heat, and corrosion resistant, and decreases its setting.

Polycem-ARM does not affect technological properties of cement mixes.

Processing

Polycem-ARM is added in dry form while making grouting and construction cement mixes.

Polycem-ARM recommended consumption rate is 50-200 kg per 1 ton of cement.

Packing

Polycem-ARM is supplied in 25-kg lots in polypropylene bags with polyethylene liners.



Viscosity controller

Viscosity controller is a polymer based on fatty acids in organic solvent.

Characteristics

Physical appearance	Viscous fluid
Density at 20°C, kg/m ³	830÷880
Flashpoint, °C, no less than	85
Chilling point, °C, no more than	0

Use

Viscosity controller decreases viscosity and shear strength in all invert emulsion muds (oil base muds (OBM)) without any necessity to dilute or change the oil/water ratio. This agent is added to invert emulsions heavily polluted with solid particles. It modifies solid particle surface, guarantees dispersion of particles and their steric stabilization in liquid phase.

The use of this additive makes it possible to:

- thin down invert emulsion muds without dilution;
- increase the density of non-aqueous drill fluid without thickening;
- decrease fluid loss of invert emulsion;
- cut temporal, material, and transportation expenses on the chemical treatment of the fluid.

Viscosity controller remains efficient in a broad range of temperatures when there are different contaminants.

Processing

Depending on oil phase type, required properties of final emulsion, and other systemic components, the consumption rate of viscosity controller may vary from 0.5 to 5.5 kg/m³.

To calculate its optimal concentration, viscosity controller should undergo preliminary lab tests before any practical use.

Retreatment of emulsion fluid with viscosity controller does not lead to deposition of barite.

Packing

Viscosity controller is supplied in 200 dm³ metal barrels.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Fluid Loss Reducer

Fluid loss reducer is a polymeric product based on organic polybasic acids.

Characteristics

Physical appearance	Light-to-dark brown mobile oily fluid
Density at 20°C, kg/m ³	970÷1000
Flashpoint, °C, no less than	75
Chilling point, °C, no more than	- 10

Use

This additive is a highly efficient fluid loss reducer for oil base muds (OBM) and used for controlling fluid loss of invert emulsions based on mineral and synthetic oils in a broad range of bottomhole temperatures. A small amount of fluid loss reducer makes it possible to form a fine water-free filtration cake and decrease fluid loss to minimal levels. Additional treatment of fluid loss with this agent during drilling improves the fluid loss properties of invert drill fluid.

Processing

Depending on oil phase type, required properties of final emulsion, and other systemic components, the working consumption rate of fluid loss reducer may vary from 5.5 to 17.0 kg/m³.

Packing

Fluid loss reducer is supplied in 200 dm³ metal barrels.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Water Repellent

Water repellent is a product based on fatty acids that is added as highly efficient wetting agent to invert emulsion drill fluids.

Characteristics

Physical appearance	Dark brown oily fluid
Density at 20°C, kg/m ³	950÷1000
Flashpoint, °C, ≥	100
Chilling point, °C, ≤	0

Use

Water repellent improves the water affinity of solid particles dispersed in oil base muds (OBM). The additive is used in case OBM is heavily polluted with solid particles, when reservoir waters flow in the well, or when water-wetted solid particles can potentially lead to a viscosity increase. The product ensures hydrophobization of any particles wetted with water and their excellent compatibility with mineral and synthetic oils.

Water repellent makes the emulsion more stable thermally and rheologically and ensures filtration control and pollution resistance.

Used for additional processing of drill fluid in drilling, water repellent improves filtration drill fluid properties.

Processing

The working concentration of water repellent varies from 3.0 to 14.0 kg/m³, which depends on oil phase type, required properties of final emulsion, and other systemic components. Additional treatment with water repellent improves water affinity of solid particles in invert emulsion drill fluid.

Packing

Water repellent is supplied in 200 dm³ metal barrels.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Organobentonite

Organobentonite is a product of interaction between bentonite and quarternary ammonium salt.

Characteristics

Physical appearance	Light grey-to-yellow powder
Moisture, wt. %, no more than	4,0
Loss on ignition, %	39-42
Screening through sieve 80- μ m (or graze No. 008), % no less than	85

Use

Organobentonite (organophilic structure former of hydrocarbon-based drill fluids) is used for regulating structural and mechanical properties of non-aqueous hydrocarbon-based drill fluids (oil base muds (OBM)) used in drilling in complex geological environment and for drilling-in of deep wells at bottomhole temperatures of up to 200 C.

Packing

Organobentonite is supplied in 25-kg lots in polypropylene or paper bags with polyethylene liners.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Emulsifier

Emulsifier is a hydrocarbon solution of a mixture of oleic, linolic, linolenic, and resin acid esters, triethanolamine, and oleic, linolic, linolenic, and resin acid amines.

Characteristics

Physical appearance	Light brown-to-brown oily mobile fluid, possibly with sediment.
Density at 20°C, kg/m ³ , no less than	835
Acid index, mg of KOH/g of emulsifier, ≤	7
Closed cup flash point, °C, ≥	30
Chilling point, °C, ≤	- 40

Use

Emulsifier is used for making invert emulsions used in well drilling and repairs, and also for improving reservoir recovery.

Packing

Emulsifier is supplied in 200 dm³ metal barrels.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polyemulsan (Compound for Making Drill Emulsions)

Polyemulsan is a mixture of products of oligomerization of alkenes and mineral distillate and residual oils.

Product Characteristics

Physical appearance	Light-to-dark brown fluid
Density at 20±2 °C, kg/m ³	800-900
Fann 35SA rotary viscometer torsion angle at 600 rpm at 20±2 °C, no more than	20

Use

Polyemulsan is used for making invert emulsion drill fluid for inclined well drilling, well completion, drilling-in, and branching.

The use of invert emulsion drill fluid prevents clay shale swelling and makes it possible to retain natural permeability of pay beds.

Packing

Polyemulsan is supplied in 200 dm³ steel barrels.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Extra Pure Quartzzy Breakstone and Grits

Extra pure quartzzy breakstone and grits are used as filtration load:

- for single-layer and multilayer high-capacity filters and contact flocculators on drinking and service water preparation points;
- in food and beverage industry, when water treatment is required;
- for swimming pool water treatment;
- for boiler-room water treatment;
- for commercial and waste water purification.

Chemical composition:	
SiO ₂ , %, ≥	98,5
Al ₂ O ₃ , %, ≤	1,8
Fe ₂ O ₃ +TiO ₂ , %, ≤	0,05
Density, g/sm ³ ,	2,5-2,6
Pour density, kg/m ³	1300 - 1500
Specific efficiency of natural radioactive nuclides in quartzzy material Aeff ERN, Bq/kg, ≤	50

Fractional composition: 10-20 mm; 5-10 mm; 2-5 mm; 1.2-2 mm; 0.8-1.2 mm; 0.4-0.8 mm.

Packing

Extra pure quartzzy breakstone and grits are supplied in 30-kg lots in polypropylene bags or in 1-ton lots in plastic big bags.



PRZ Brown Stone (MnO₂) Grits

PRZ brown stone grits are intended for specialized water treatment, i.e., for eliminating iron and manganese oxides during drinking and service water filtration. Iron is not a toxic element but, if it is consumed for a long period of time, excessive iron will accumulate in the liver in the form of hemosiderin that destroys liver cells. In addition, iron encourages intensive microflora development, gives water an unpleasant taste, preconditions rusty encrustation of dishware, electric appliances, and plumbing fixtures.

The use of PRZ decreases iron (≤ 0.2 mg/l) and manganese (≤ 0.1 mg/l) content in a broad range of water constitution and properties.

PRZ filtering agent is a complex of natural manganese-containing minerals. When water comes into contact with manganese superoxides in their mineral form, ferrous iron oxidizes and becomes precipitating ferric hydroxide (Fe[OH]₃). In addition, these superoxides ensure the transformation of divalent manganese into a marginally soluble manganese bioxide the sediment of which is an active sorbent (neutralizes hydrogen sulphide).

To capture ferric hydroxide and manganese bioxide sediment, quartzly sands with highly homogeneous PSD and sphericity are recommended. Other kinds of filtered materials are also permitted for use together with PRZ.

Product Characteristics

Weight fraction of MnO ₂ , %, no less than	50,0
Weight fraction of main granulometric class, %, no less than	85
Weight fraction of particles exceeding upper nominal size, %, no more than	5
Weight fraction of particles smaller than bottom nominal size, %, no more than	10
Pour density, kg/m ³ , no less than	1500

There are two main granulometric classes of PRZ: 0.8-1.2 mm and 0.4-0.8 mm. PRZ shows considerably better performance than its foreign counterparts: Birm Regular and Manganese Greensand.

Use

PRZ is used together with quartzly sand. The top layer of manganese filtration material is set with a height of 40-100 mm, depending on iron content in water and performance characteristics of filters. Thanks to its high strength and density, and low consumption, PRZ ensures efficient back flushing and longer operation periods of three years or more.

Packing

PRZ is supplied in 10- and 25-kg lots in polypropylene bags with polyethylene liners.



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycell Scientific and Production Association” closed joint-stock company (Polycell SPA CJSC) is a producer and supplier of chemicals for oil and gas industry. The broad spectrum of our chemicals makes it possible to solve a large range of diverse problems in oil field drilling and development as well as provide support for maintenance overhaul of and repair-and-renewal operations on gas, condensate, and oil wells.

Our business model envisages comprehensive support of oil and gas well site construction with highly efficient materials and reactants.

The high quality of our reactants is guaranteed by total process control. The fully integrated production and the research departments provide a highly customized approach to producing reactants according to orders from particular customers. “Polycell SPA” CJSC has its own continuing education and analysis centre that provides training courses for specialists in service support of drill fluids.

The Company holds annual research and workshop training conferences, attended by leading specialists from chemical and oil and gas industry, participates in international exhibitions and forums, and has been duly honoured for corporate achievements with the certificates “For Industrial Leadership” and “Russian Industry Leader”. Polycell SPA CJSC is a prize winner of the annual competition “100 Best Russian Companies. Ecology and Environmental Management,”and has adopted the ISO 9001-2008 standard.

Quality Management Requirements. Our recipe for success combines an up-to-date approach to customized production of reactants, reliable quality management, and reasonable price policy.





Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Our service department offers the following services:

Support of drill and washing fluids and purification system from programme making to job completion.

Polycell SPA CJSC supplies all chemical reactants and materials necessary for preparation and processing of drill fluids within the framework of engineering support for drill fluids during well drilling on the Customer's sites.

Highly qualified specialists instructed at our training-and-analysis centre administer drill fluids preparation, monitoring of process parameters with the help of modern on-the-job labs and direct parameter regulation procedures during wellsite construction in compliance with the Well Cleanout Programme adopted and developed according to the Customer's orders.

Together with their reasonable consumption and optimal use in drill fluids, proper storage of chemical reactants and materials makes it possible to achieve high technical economic performance and ensure fault-free well making in difficult geological environment by excluding or minimizing potential drilling complications.

Organization of isolation of disastrous lost circulation areas.

Our specialists organize both, prevention of loss of returns with the help of specific reactants and activities for eliminating disastrous lost circulation using specialized equipment and composites.

Organization of waste collection, neutralization, transportation, and dumping.

The services are licensed.

Using specialized equipment, our company can organize collection, transportation, and dumping of drilling waste as part of wellsite construction and offers you several procedures for drill waste handling:

- Drill waste neutralization.

This procedure includes collection of drill waste using specialized motor vehicles directly on cluster pads and transportation of drilling sludge and used drill fluids to disposal sites and neutralization zones, respectively. A neutralization zone is a complex of equipment units connected with each other in production cycle processes based on cleanout of processed drill fluid in vibrating sieves and centrifuges and chemical processing in the filtration-and-sedimentation plant of the coagulation-and-filtration unit. The resulted clarified water can be used in making new solutions, and clarified water surplus is directed to the complex of purification equipment for pumping down to absorbing wells. The exploitation of the neutralization zone allows the Customer to optimize its costs, in particular, by water consumption decrease, and pay lower fees for negative environmental effects of waste allocation.

- Drilling waste deactivation by capsulation.

Drilling waste can be deactivated by mechanically mixing it with special reactant Econaft.

This procedure is performed on a Hector-type unit made in Germany by «Gebrüder Lödige Maschinenbau, GmbH». As a result of waste processing and deactivation, a capsulated material of varied structure is obtained. According to ToR 5716-004-11085815-2000, this material corresponds to PUN mineral powder and can be used in forming the zero level of well pads and road slopes, in recultivation activities, and for other construction purposes.

- Development of Recipes of Drill and Washing Fluids
- Training-and-Analysis Centre



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycell SPA CJSC supplies all chemical reactants and materials necessary to prepare and process drill fluids as part of engineering support for drill fluids during well drilling on the Customer's sites.

- Engineering Support for Drill Fluids
- Training-and-Analysis Centre



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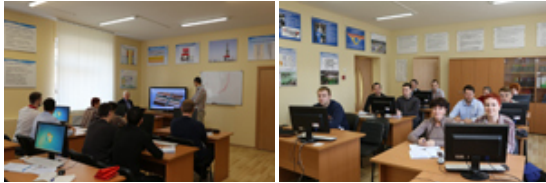
Those who successfully complete the course go working on drillsites of the Krasnodar krai, West and East Siberia, Yamal, and Yakutia. The head training-and-analysis centre is located in Vladimir and has modern laboratory equipment that allows us to provide state-of-the-art instruction. The centre has two branches: in Samara and in Moscow.

- Formulation of Recipes of Drill and Washing Fluids
- Engineering Support of Drill Fluids



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycell SPA CJSC has its own training-and-analysis centre where specialists for service support of drill fluids are trained. Those who successfully complete the course go working on drillsites of the Krasnodar krai, West and East Siberia, Yamal, and Yakutia. The head training-and-analysis centre is located in Vladimir and has modern laboratory equipment that allows us to provide state-of-the-art instruction. The centre has two branches: in Samara and in Moscow.



For more information on training call

(4922) 32-68-84

e-mail: efremov@npo-polycell.ru



Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Our complex R&D laboratory is involved in constant search and synthesis of new kinds of reactants and drilling fluids. Customer feedback makes it possible to provide rapid response to the Customer's requests. Reactants for changing drilling conditions are selected in direct touch with service departments.





Polycell SPA CJSC Legal and postal address: 3 Lineynaya st., Vladimir, 600020 Russia

Polycell SPA CJSC

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Find on the map