USG INDUSTRIAL GROUND GYPSUM

USED AS A GYPSUM DRILLING FLUID ADDITIVE

ADVANTAGES

- Highly soluble source of calcium to "supersaturate" drilling fluids.
- Simple additive to drilling fluids to help drill through gypsum/anhydrite and/or calcium-rich shale areas to combat formation sloughing.
- Does not buffer pH of drilling fluid.
- Economical treatment of carbonate-contaminated drilling fluids.

PHYSICAL PROPERTIES AND MANUFACTURING LOCATIONS

USG Industrial Ground Gypsum (Minimum Guaranteed Analysis)

Baltimore, MD	Calcium Sulfate	Calcium Sulfate %	Elemental Ca	Elemental S
	Dihydrate %	As Anhydrite	Equivalent %	Equivalent %
	85.0	1.6	19.8	15.8

From Baltimore, MD in 50 lb. and 100 lb. bags and also in bulk.

Southard, OK	Calcium Sulfate	Calcium Sulfate %	Elemental Ca	Elemental S
	Dihydrate %	As Anhydrite	Equivalent %	Equivalent %
	93.0	0.7	21.7	17.3

From Southard, OK in 50 lb. bags and 3,000 lb. supersacks.

Fort Dodge, IA	Calcium Sulfate Dihydrate %			Elemental S Equivalent %
	90.0	0.2	21.0	16.8

From Fort Dodge, IA in 50 lb. and 100 lb. bags and also in bulk.

Detroit, MI	Calcium Sulfate	Calcium Sulfate %	Elemental Ca	Elemental S
	Dihydrate %	As Anhydrite	Equivalent %	Equivalent %
	88.0	0.0	20.4	16.4

From Detroit, MI in 3,000 lb. supersacks and also in bulk.

TYPICAL PARTICLE SIZE DATA

SIEVE ANALYSIS	% Passing 4 Mesh	% Passing 8 Mesh	% Passing 16 Mesh	% Passing 30 Mesh	% Passing 50 Mesh	% Passing 100 Mesh	% Passing 200 Mesh	% Passing 325 Mesh
Baltimore	100%	100%	99.9%	99.9%	99.5%	95.2%	77.4%	57.0%
Southard	100%	100%	100%	100%	100%	100%	99.9%	99.7%
Fort Dodge	100%	100%	99.9%	99.7%	99.6%	92.5%	76.1%	58.8%
Detroit	100%	100%	100%	99.94%	99.6%	97.9%	84.1%	64.2%

SOLUBILITY

- Solubility of gypsum is approximately 2.6 g/L.
- Solubility rate of gypsum in deionized water at 20°C is 1.1 x 10-8 mol/cm²/sec*.



^{*}Solubility rate differs slightly with changes in calcium sulfate dihydrate purity and particle size distribution.

MATERIAL SOURCE

STORAGE AND HANDLING

USG gypsum drilling fluid additives are derived only from high purity gypsum sources.

All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements. Lumping may occur if stored outside.

LIMITATIONS

Exposure to excessive or continuous moisture should be avoided.

PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

DANGE

May cause cancer by inhalation of respirable crystalline silica. Do not handle until all safety precautions have been read and understood. Use only in a well-ventilated area, wear a NIOSH/MSHA-approved respirator. Wear protective gloves/protective clothing/eye protection. If swallowed, inhaled, or skin irritation occurs immediately get medical attention. Dust may cause irritation to eyes, skin, nose, throat and upper respiratory tract. If on skin: Wash with plenty of water. Dispose of in accordance with local, state, and federal regulations.

For more information call Product Safety: 800 507-8899

or see the SDS at usg.com

KEEP OUT OF REACH OF CHILDREN.

TRADEMARKS

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NOTICE

BECAUSE THE CONDITIONS OF USE OF THIS PRODUCT ARE BEYOND THE SELLER'S CONTROL, THE PRODUCT IS SOLD WITHOUT WARRANTY, EITHER EXPRESS OR IMPLIED, AND UPON CONDITION THAT PURCHASER MAKE ITS OWN TEST AND DETERMINE THE SUITABILITY FOR PURCHASER'S APPLICATION.

Purchaser assumes all risk of use and handling of this product. This product will be replaced if defective in manufacture or packaging or damaged. Except for such replacement, Seller is not liable for any damages caused by this product or its use. The statements and recommendations made herein are believed to be accurate. No guarantee of their accuracy is made, however. We shall not be liable for incidental or consequential damages directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from the date it was or reasonably should have been discovered.

SAFETY FIRST!

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and literature before specification and installation.

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