



# AQUA-CLEAR® MGA

Modified Granular Acid

**Description** AQUA-CLEAR MGA is a dry blend of granular acid and additives used in the removal of iron, manganese and carbonate scale. It retains strength longer than most liquid acids, which increases its cleaning capability.

**Applications/Functions**

- Disperse scale and incrustation
- Remove scale and incrustation from the water well screen, casing, gravel pack and pumping equipment
- Restore well production
- AQUA-CLEAR MGA can be used in combination with AQUA-CLEAR® AE to remove more difficult scale and incrustation

**Advantages**

- NSF/ANSI/CAN Standard 60 certified
- Safe to use on all plastics, rubber, and metals
- No harmful vapors
- Improves water quality (color, taste and appearance)
- Reduces equipment and piping failures due to scale build-up and corrosion
- Reduces pumping costs

**Typical Properties**

• Appearance	Free-flowing, off-white granules
• Specific gravity	2.00
• pH (10% solution)	0.9
• Solubility in water	Complete with slight to hazy turbidity

**Recommended Treatment** *To treat bacteria fouling and scale encrustation:*

- Record initial well water pH.
- It is always recommended to mix acid formulations in pre-determined volumes of freshwater on the surface and ensure they are uniformly mixed prior to placement into the screened interval of the well.
- The preferred application method is to apply the mixture containing AQUA-CLEAR MGA into the screened interval through a dual disc surge tool that is perforated between the discs. This allows the user to uniformly treat the entire screened interval with the acid solution.
- Mix AQUA-CLEAR MGA with water at 1.0 pound per gallon of water or 120 kg/m<sup>3</sup> of water and apply directly into screened interval using a dual disc surge tool with perforations between the discs or a tremie pipe.
- When utilizing this method, the minimum calculated volume of water can be determined by using the borehole diameter and the length of the screened interval and double the calculated volume to account for the water present inside the screen, gravel pack and the formation interface.

**Recommended  
Treatment  
(continued)**

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***Note: The above concentration of AQUA-CLEAR MGA is recommended for a complete rehabilitation/reconditioning of an existing well.***

- Displace solution into the well screen and formation, then surge, swab, agitate or jet well through screen and gravel pack for 20-30 minutes.
- Allow to stand in well for up to two hours and then repeat activity approximately every two hours for a period of 24 hours.
- Pump well water to captured waste until produced well water pH is within 0.5 of original well pH.

***Note: Wastewater can be neutralized by adding soda ash or lime.***

- Once turbidity specifications and pH requirements have been met then and only then can the well be chlorinated and reconnect to water distribution system.
- Remember in many locations it is required to capture and submit a water sample for bacterial analysis to confirm the water is safe before reconnecting to the distribution system.

***Caution: Never mix chlorine and AQUA-CLEAR MGA in well.***

***Notes:***

- **To optimize outcome, it is always recommended to begin by airlifting any biomass and debris from the well. To better prepare the well for rehabilitation, the second step is to remove as much encrustation and biomass mechanically from the interior of the**
- **To achieve the best rehabilitation outcome, it is always recommended to mix AQUA-CLEAR AE and AQUA-CLEAR MGA together to enhance penetration of scale and biomass materials.**

<b>Safety</b>	<ul style="list-style-type: none"> <li>• AQUA-CLEAR MGA is safe to handle when in dry form, but when mixed with water it should be handled in accordance with recognized standard practices for handling corrosive and acidic materials (refer to Safety Data Sheet).</li> <li>• Avoid skin and eye contact – flush with water.</li> <li>• Do not ingest and avoid prolonged inhalation.</li> <li>• When disposing of waste fluid make sure to comply with all federal, state and local regulations as applicable.</li> </ul>
<b>Packaging</b>	AQUA-CLEAR® MGA is packaged in 5-gal (19-liter) pails containing 50 pounds (22.7 kg) or 550-lb (250 kg) drums.
<b>Shipping</b>	<p>The following are required for commercial transport:</p> <ul style="list-style-type: none"> <li>• Insurance policy must include an endorsement for transporting hazardous cargo.</li> <li>• Vehicle driver must have a Hazmat endorsement on his/her Commercial Driver's License.</li> <li>• Hazardous Materials Certificate of Registration issued by the U.S. Department of Transportation (renewable annually) is required.</li> <li>• Consult the state in which operating for any additional requirements that may exist.</li> <li>• No hazardous materials placard is required for shipments less than 1000 pounds.</li> </ul>
<b>Availability</b>	AQUA-CLEAR MGA can be purchased through any Baroid Industrial Drilling Products Retailer. To locate the Baroid IDP retailer nearest you contact the Customer Service Department in Houston or your area IDP Sales Representative.

### **Baroid Industrial Drilling Products**

#### **Product Service Line, Halliburton**

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Houston, TX 77032

<b>Customer Service</b>	(800) 735-6075 Toll Free	(281) 871-4612
<b>Technical Service</b>	(877) 379-7412 Toll Free	(281) 871-4613