

PRODUCT PROFILE

Ammonium Hydroxide Manufacturing Process

Hill Brothers' ammonium hydroxide is manufactured in a closed system by combining high purity water with anhydrous ammonia. Hill Brothers uses safe and reliable in-house quality control procedures for determining the anhydrous ammonia content of our manufactured ammonium hydroxide. Our ammonium hydroxide is manufactured in compliance with current Good Manufacturing Practices (cGMP), meets the Food Chemical Codex (FCC) specification as listed in the FCC monograph, and is NSF/ANSI 60 certified.

The manufacturing and quality control (QC) process is as follows:

- Ammonium hydroxide is manufactured by blending high purity water and anhydrous ammonia in a closed system.
- The ammonium hydroxide is continuously tested throughout the manufacturing process to confirm that the desired product concentration has been achieved.
- The observed specific gravity of the material and the corresponding product temperature are used to determine the ammonia content. From this data, the quantity of D.I. water or anhydrous ammonia required (if any) to achieve the target strength can be determined.
- All quality control measurements are recorded with the customer's name and transportation carrier in our quality control tracking logs.
- A "Certificate of Analysis" detailing the ammonia concentration will accompany bulk shipments.

Quality Control is an extremely important aspect of Hill Brothers' manufacturing process. On an annual basis our ammonium hydroxide manufacturing process is audited by NSF. As part of their annual audit, NSF performs a detailed analysis on the ammonium hydroxide to ensure that the product meets NSF Standard 60 requirements. In addition, bi-annually, a sample of the product is sent to a third-party laboratory for analysis to ensure that the ammonium hydroxide meets ACS (American Chemical Society) and FCC (Food Chemical Codex) standards.

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The information on this Product Profile is based on data obtained by our own research and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data, the results to be obtained from the use thereof, or that any such use will not infringe any patent. This information is furnished upon the condition the person receiving it shall make his own tests to determine the suitability thereof for his particular purpose. For latest product specifications, contact our nearest sales office.

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