

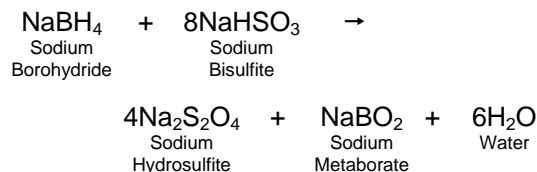
Product Information Bulletin

MontBrite 1240[®] Sodium Borohydride Solution

MontBrite 1240 is a stable aqueous solution of sodium borohydride (NaBH₄) and caustic soda (sodium hydroxide, NaOH), used by the pulp and paper industry in the on-site generation of sodium hydrosulfite (Na₂S₂O₄) bleach for the reductive bleaching of wood pulp and kaolin. The all liquid system, automatically produces bleach solution on demand, provides the user with a readily available source of fresh bleach solution containing minimal quantities of corrosive decomposition products.

Sodium Hydrosulfite Production

Sodium hydrosulfite is produced in an automatically controlled bleach generating unit by the continuous reduction of sodium bisulfite with sodium borohydride, based on the following reaction:



The sodium bisulfite required for the process can be obtained from outside merchant sources, other on-site operations, or produced simultaneously in the bleach generating unit through the addition of sulfur dioxide and sodium hydroxide.

The optimum reaction pH of 6.5 - 7.0 is maintained by adding the proper amount of sulfuric acid, or sulfur dioxide and sodium hydroxide. After generation the hydrosulfite bleach solution pH may be raised, usually with sodium hydroxide, to the 8.5 - 10.0 range to ensure stability and minimize the formation of corrosive sodium thiosulfate during storage.

All materials used in the bleach generation process are stable liquids, delivered in bulk, therefore operator attention to the process and the hazards of handling merchant bleach powder are minimized.

Physical Properties

Sodium borohydride		12±0.2%
Sodium hydroxide		40±2.0%
Freezing point		13°C (55°F)
pH		14.0+
Density	@23°C	1.4gm/cc
	@73°F	11.7lbs/gal

Storage and Handling

MontBrite 1240 solution is extremely stable, undergoing minimal decomposition during long term storage, and should be stored and handled following standard procedures for caustic soda (sodium hydroxide) solution. Contact with Aluminum and other materials which react with sodium hydroxide solutions should be prevented. Contact with acids or acidic materials and extreme dilution should be prevented, as hydrogen gas may be released. Ventilate spill areas and flush with large quantities of water, per Material Safety Data Sheet instructions.

Shipping Information

MontBrite 1240 is available for bulk shipment in 10,000 gallon tank cars, 4,000 gallon tank trucks, and in 275 gal. (3,200 pound) tote bins. Other packaging is also available to meet specific customer requirements.

Technical Assistance

On-site customer technical support and assistance for all aspects of MontBrite 1240 usage and handling, including product transport and storage, bleach generation unit design, fabrication, startup, calibration, and service, and economic analysis is available to all MontBrite 1240 customers. Mills presently using merchant hydrosulfite liquid or powder, or sodium borohydride for bleach generation,

Contact Montgomery Chemicals, LLC for complete product information, including suggested safety, handling, and storage procedures, transportation designations, and Material Safety Data Sheets. The material contained herein is believed to be accurate, however no warranty or guarantee is made as to accuracy or completeness. Nothing contained herein is to be construed as permission to infringe on any patent or license. Determination as to suitability of this product for a particular application is solely the responsibility of the user.

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