



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

APR - 8 2003

Mr. Gary L. Hansen
Binex, Inc.
4410 South Century Drive
Murray, UT 84123

Ref. No. 02-0300

Dear Mr. Hansen:

This is in response to your letter and subsequent telephone conversation with a member of my staff concerning the applicability of the Hazardous Materials Regulations (49 CFR Parts 171-180 to a solution of sodium perchlorate. Specifically, you ask that the material be "correctly reclassified" as non-regulated under the HMR because it does not meet the definition for Class 5.1 (oxidizer) in § 173.127. You state your solution contains 51% sodium perchlorate, 39% water, and 10% ethylene glycol, and that the ethylene glycol keeps the solution in liquid form during transportation.

Under the HMR, unless an entry is preceded by a plus (+) sign in Column(1) of the § 172.101 Table, a material listed by name that does not meet the corresponding hazard class may not be described using that description (see § 172.101(c)(12)). If the solution containing 51% sodium perchlorate, as described in your letter, does not crystallize during transportation, it does not meet the criteria for a Class 5.1 hazardous material. Provided the solution does not meet the definition of any other hazard class, and is not a hazardous substance, hazardous waste, or a marine pollutant, it is not regulated under the HMR.

I hope this information is helpful. If you have additional questions, please do not hesitate to contact this office.

Sincerely,

Hattie L. Mitchell, Chief
Regulatory Review and Reinvention
Office of Hazardous Materials Standards



020300

172.101

BINEX INC.

4410 South Century Drive • Murray, Utah 84123 • (801) 268-2043 • FAX (801) 268-2047

McIntyre
8172-101
Classification
02-0300

13 November 2002

Mr. Edward T. Mazzullo
Director, Office of Hazardous Materials Standards - DHM-10
U.S. Dept. of Transportation
Research and Special Programs Administration
400 7th St. S.W.
Washington, DC 20590

Dear Sir,

Binex has been working with an aqueous sodium perchlorate solution as an oxidizer in binary explosives for many years. We purchase the solution from Western Electro-Chemical (WEECO) in Cedar City, Utah where it is labeled "oxidizer" and shipped in 55-gallon drums at about 64% concentration. They indicate in their literature that concentrations of over 60% should be labeled "oxidizer." It is shipped to us as UN # 1502, hazard classification 5.2.

Binex blends the solution down to a concentration of 51% by adding water and ethylene glycol (EG). This provides a very low freezing point of -40 degrees for meeting military applications. The final formulation is:

	%
Sodium Perchlorate	51
Water	39
EG	10

Binex and the U.S. Army at Picatinny Arsenal (ARDEC) have cooperatively participated in the development of this safe and effective solution. It is safe to manufacture, store and ship. It is not flammable; has very low vapor pressure; no smell; no volatility; and can be stored indefinitely in plastic containers.

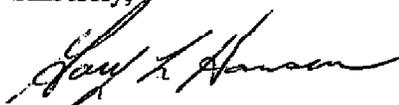
The current use of this solution is in a binary explosive to aid the soldier in digging foxholes. It is designated M-300 and has been qualified by the U.S. Army. Each fighting position excavator (FPE) contains 115 grams of solution. We are anticipating a larger version of this product for general military use, which will contain 348 grams. The largest quantity we can foresee shipping is about 60 lbs packaged in a 5-gallon carboy.

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Based upon the available commercial literature, and testing by the U.S. Army, Binex believes that this 51% Sodium Perchlorate Solution does not pose the hazard indicated by the Oxidizer classification. Therefore, Binex recommends that this material be correctly reclassified to allow shipment as "Freight of All Kinds". Binex respectfully requests the Office of Hazardous Materials Standards review the proposed hazard reclassification, and provide any recommendations or comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gary L. Hansen".

Gary L. Hansen
President, Binex Inc.