

## FERTILIZER INDUSTRY METHAMPHETAMINE TASK FORCE Calcium Nitrate Fact Sheet

The Illinois Fertilizer & Chemical Association is a member of The Fertilizer Industry Methamphetamine Task Force. The task force met on November 1, 2006 to review information available on the announcement of the availability of calcium nitrate (CN9) an effective additive to anhydrous ammonia to render it ineffective in the production of methamphetamine. The task force is hopeful that this information, as well as the links to background information provided by the State of Iowa, will be helpful. The Fertilizer Institute in Washington, D.C. helped provide the information for this Fact Sheet.

**Q. Does CN9 render anhydrous ammonia unusable for meth production?**

A. Yes, according to tests performed at the Iowa DCI Crime Lab.

**Q. How much CN9 is required to treat anhydrous ammonia?**

A. It takes approximately 9 gallons (110 pounds) of CN9 to treat one ton of anhydrous ammonia.

**Q. What is the analysis of CN9?**

A. Total Nitrogen: 9%  
    0.58% Ammoniacal Nitrogen  
    8.42% Nitrate Nitrogen  
Soluble Calcium 11%  
Weight Per Gallon 12.2 lbs

**Q. Does CN9, when introduced into an ammonia nurse tank changes the analysis of NH3?**

A. Yes. CN9 reduces the analysis of NH3 from 82-0-0 to 78-0-0.

**Q. What types of NH3 tanks were tested using CN9?**

A. Only anhydrous ammonia nurse tanks have been tested. No testing has been performed on ammonia storage tanks, transport vehicles or rail cars. Therefore, instructions from the Iowa Dept of Ag call for the product to be injected only into nurse tanks.

**Q. Will testing be conducted on other modes of transporting NH3?**

A. No, at this point no further testing is scheduled on storage tanks, transport vehicles or rail cars are scheduled at this time.

**Q. How is CN9 inserted into the anhydrous ammonia nurse tanks?**

A. CN9 must be inserted through the liquid withdraw valve only to prevent heating and rise in pressure. If not introduced through the liquid withdraw valve, the increase in pressure can cause the pop-off valve to release.

**Q. Do you have to reduce the amount of ammonia in a nurse tank to allow for the addition of CN9 which also contains 40% water?**

A. No, nurse tanks can be filled to 85% of capacity with anhydrous ammonia. CN9 can then be added to the ammonia through the liquid withdraw valve on the nurse tank. It is important to note the addition of the recommended amount of CN9 will increase tank capacity to 87%. (Keep in mind that many state level Departments of Agriculture regulations, such as Illinois, only allow tanks to be filled to 85% capacity.)

**Q. How do you insert CN9?**

A. You can use an N-serve pump or similar pump to insert CN9 into the tanks. If you use the same pump for N-serve and CN9, the pump must be thoroughly rinsed between uses.

**Q. What was the age of nurse tanks used in the Iowa Department of Agriculture tests?**

A. Nurse tanks tested with assistance from Iowa Department of Agriculture have been in use for a number of years. They were not recently manufactured tanks.

**Q. Were the welds on the tanks tested in conjunction with Iowa Department of Agriculture negatively affected?**

A. The answer is unknown since the tanks used have not been internally inspected.

**Q. Was there any salting out?**

A. No.

**Q. How long does it take to insert CN9 in a nurse tank?**

A. According to Iowa Department of Agriculture it takes approximately 10-15 minutes to insert the required quantity of CN9 into a 1,000 gallon nurse tank.

**Q. Were there any internal inspections conducted prior to adding CN9 to nurse tanks?**

A. No. But it was indicated at the meeting that the tanks tested by Iowa Department of Agriculture will be cut open and inspected for internal tank corrosion.

**Q. Does the addition of CN9 to ammonia change the DOT shipping description?**

A. Iowa DOT does not think so but is pursuing this further with USDOT in Washington. Since nurse tanks are exempt from hazardous material shipping papers this issue may not be of immediate importance.

**Q. How much will CN9 cost?**

A. It is estimated that CN9 will cost \$9 per ton of treated anhydrous ammonia, not including handling or possible storage costs. Since CN9 is a fertilizer and early indications are that the product may only be sold in bulk, the CN9 may be required to be stored within containment based on the quantity stored and state regulations; therefore containment permits may need to be modified and approved to allow for CN9 storage.