

# Hazard Alert



## RED - DANGER

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### Carbo\*Prill Fire

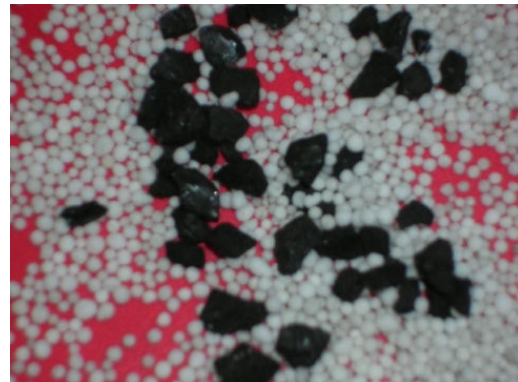
#### Hazard Notification:

The following incident took place on 23 September, 2008.

At 5:15 AM, Tuesday, September 23, a Dyno Nobel Transportation driver picked up Carbo\*Prill (see **Comment and Information** section of this document for details) from a storage bin at the Owensboro, KY Riverport Authority site. The Port Authority Loader saw "orange glowing embers" as he loaded the Carbo\*Prill into the DNTI trailer. The loader continued to load the coal into the trailer compartment until full. He then instructed the driver to scale the Carbo\*Prill load. After receiving the weight the trailer was then loaded with AN into the remaining compartments. After the final scaling was completed the loader told the driver the load was "hot". The message was understood to mean warm and no discussion was given about burning, or embers, or orange Carbo\*Prill. The driver proceeded with the load to the Freedomville Mine in Indiana. After mixing the products and blowing about 9,000 lbs into the mine site bin the driver observed smoke coming from the top of the bin. The driver looked in the sight gauge of the discharge pipe and saw glowing embers. He immediately shut the system down and notified mine management, his supervisor, and the customer. After conducting a risk assessment, the bin's contents were dumped into a front end loader and spread out on the ground. The Carbo\*Prill in the trailer was emptied and spread on the ground. The Owensboro Riverport Authority was notified and they stopped additional loading and contacted Carbo\*Prill. One additional load had been sent to the Augusta mine that day and the driver was notified not to mix the product. His load was spread out on a coal pile.



Carbo\*Prill (w/o ammonium nitrate or oil)



C\*Pan (finished product)

#### Findings and Conclusions:

The exact cause of the burning Carbo\*Prill is unknown. The matter is being investigated by the manufacturer.

Early investigations indicate that Carbo\*Prill had received complaints about caking of prill because of moisture in the coal. To combat this they started introducing crude oil to the product, followed by a drying process. This process created extra coal dust in the Carbo\*Prill. It is believed that the extra dust in combination with contaminants in the crude oil may have contributed to the ignition.

Coal particles can be subject to spontaneous combustion which, according to the MSDS, "may occur under storage conditions of elevated temperatures and a continuous supply of oxygen. The MSDS goes on to state, "Avoid accumulation of dust. When present in high concentrations, dry coal is a moderate explosion hazard".

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An incident review meeting was held on 25 September and the facts known at the time were discussed. Several actions were identified at that time and are outlined in the **Actions Required Section** below.

### Actions Taken:

1. Carbo\*Prill was contacted and told to pick-up all non-blended product.
2. Directions were given to all sites using Carbo\*Prill to consume all existing stocks (accomplished within the week).
3. Blended product should be gravity dumped or auger loaded. Pneumatic loading is prohibited.
4. DNTI has been instructed not to transport any Carbo\*Prill.
5. A Hazard Alert is to be written and distributed.
6. All equipment used to transport or store Carbo\*Prill will be pressure washed to ensure that there is no residual product in the tanks.

### Action Required:

1. **Management of Change must be strengthened within the Company.**
  - a. No review of design modification of tanker to accommodate the hauling of the Carbo\*Prill material.
  - b. No written SOP for handling, storage or use of Carbo\*Prill.
  - c. Inadequate training for drivers and loaders of the Carbo\*Prill tankers.
  - d. Inadequate emergency procedures.

### Comments and Information:

Carbo\*Prills are a specially cleaned and sized coal granule. This “unique” coal product comes from the Lower Friendsville seam of the Vigo Coal Mine near Evansville, Indiana and is being promoted for use in explosives.

The standard Carbo\*Prill blend called C\*Pan contains 25% coal Carbo\* Prill, 72% AN prills and 3% fuel oil. The addition of coal to the standard ANFO blend reduces the overall price of the explosive product without sacrificing performance as claimed by Carbo\*Prill Inc.



Trailer



Sight Glass

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