

# DRY CHEMICAL TOXICITY EXTINGUISHING AGENT

## Market Sheet

**Pyro-  
Chem**

Frequently we have requests regarding the toxicity of PYRO-CHEM® dry chemical extinguishing agents. Following is some general information regarding these materials.

On the basis of a use factor with people exposed to the various dry chemicals through fire test programs, fire training, and the production of these materials, there is no record of a toxicity problem. However, because dry chemical is a finely divided solid material it can become suspended in the air causing a mild discomfort comparable to that experienced in any dust laden atmosphere.

When PYRO-CHEM® dry chemicals are used on a fire, they do not break down into toxic materials. However, when responding to a fire, many people ignore a most dangerous aspect which is exposure to the products of decomposition produced by the burning material. These products of decomposition can produce species having toxicity levels ranging from lethal to a level that will cause only a temporary mild illness. Exposure to these products rather than the dry chemical extinguishing agent is what, in a majority of cases, causes after fire illness.

Information regarding the various materials used to produce PYRO-CHEM® dry chemical extinguishing agents is as follows:

1. Sodium Bicarbonate: Sodium bicarbonate is the basic ingredient used in BC dry chemical. The sodium bicarbonate that PYRO-CHEM® uses is a technical grade material. Exposure to this material when used as a fire extinguishing agent is not toxic to humans.
2. Potassium Bicarbonate: Potassium bicarbonate is the basic ingredient used in Purple-K dry chemical; and is a technical grade material. Exposure to this material when used as a fire extinguishing agent is not toxic to humans.
3. Monoammonium Phosphate: Monoammonium phosphate is the basic ingredient used in ABC (multi-purpose) dry chemical, and is a technical grade material. Exposure to this material when used as a fire extinguishing agent is not toxic to humans.
4. Additives: Other additives used in dry chemical formulations are all inert materials which are considered non-toxic to humans. All of these are present in dry chemical in small quantities only. They are all materials which have been used for a number of years in dry chemical formulations. There is no record of any toxic or irritating effects from handling any of these in their raw state or from their use in dry chemical extinguishing agents.

All Johnson Controls dry chemical fire extinguishing agents are mixtures of chemicals and are, therefore, not subject to the Toxic Substances Control Act (TSCA).

Should more specific information regarding one or more of the dry chemical extinguishing agents listed be required, please contact Johnson Controls, Marinette, Wisconsin 54143-2542.