

**NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF FIRE SAFETY
OFFICE OF THE STATE FIRE MARSHAL**



SECURITY ALERT

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SECURITY ALERT 14-1

Identification of Precursor Materials

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In chemistry, a **precursor** is a compound that participates in the chemical reaction that produces another compound. For terrorist organizations and individuals with terrorist intents, precursor materials are used to make improvised explosive devices (IEDs) or improvised incendiary devices (IIDs). Typically, these materials individually are relatively safe to handle. However, when two or more are combined into a new compound, it may become extremely unstable and destructive if detonated or ignited.

It is important that first responders are aware of the potential for precursor materials to be found and recognized at emergency scenes. Most precursor materials - chemicals, hardware, explosives, to name a few - can be legally purchased within the United States. They are available at retail and hardware stores, beauty salons, swimming pool supply companies and online. First responders have a unique opportunity to discover and report materials and suspicious activity that may indicate preoperational planning.

Blended Homemade Explosive (HME) – HMEs are made by combining commercially available ingredients to create an explosive substance. Because of their relative ease in making, three of the most commonly found HMEs are:

Triacetone Triperoxide (TATP)

Considered a primary high explosive, TATP is comprised of hydrogen peroxide, acetone, and a strong acid.

LOOK OUT FOR:

- White crystallized powder.
- Odors of acetone.
- Kept in an ice bath during preparation.
- White bleached spots on their hands.
- Presence of lab equipment.



Potassium Nitrate (KNO3)

A principal component of black powder also used in fertilizers and fireworks. Non-combustible but enhances the combustion of other substances.

LOOK OUT FOR:

- White to colorless appearance.
- Odorless.
- Granular or crystalline powder.



Methyl Ethyl Ketone Peroxide (MEKP)

This liquid is commonly used as a curing agent for various plastics. Combining MEKP with ammonium nitrate results in a crude concentration of ammonium nitrate dynamite.

LOOK OUT FOR:

Pale yellow to colorless liquid.
Precursors to MEKP include hydrogen peroxide, strong mineral acid (such as sulfuric acid), or methyl ethyl ketone.
Dangers associated with inhalation.



Additional Indicators of Precursor Materials

- Foul odors or caustic fumes coming from a room or building.
- Damage to ceiling or wall paint and corrosion of metal surfaces.
- Strong chemical odors from sewers and drain ditches.
- Large fans or multiple fans in windows.
- Dead vegetation in the surrounding area.
- Presence of metal or plastic drums or containers.

It should be pointed out that all of these materials have legitimate uses and the mere presence does not necessarily indicate ill intent. However, large quantities or even relatively small quantities in makeshift laboratory settings may indicate something that should be reported to law enforcement.

It is also interesting to note that bomb detecting K-9s imprinted with nitrate based explosives may not give positive indications on some of these precursor materials. However, K-9s trained in the detection of ignitable liquids will be able to detect non-nitrate based precursors including Acetone and Methyl Ethyl Ketone.

As always, the Division of Fire Safety recommends all responders to incidents involving chemicals protect themselves by utilizing appropriate PPE including respiratory protection.

PLEASE POST IMMEDIATELY