

Discovery of IED with a Heterogeneous Explosives Mixture Which Included TATP

Background

(U//FOUO) On July 28, 2009, the Ocean City (MD) Fire Marshal Office/Bomb Squad was dispatched in response to a report of a suspicious item discovered on the beach by a local resident. The item, which was actually an Improvised Explosive Device (IED), was found to be approximately six (6) inches long by four (4) inches wide, completely wrapped in duct tape and black electrical tape. Also observed on the device was a length of pyrotechnic fuse, and "D" cell battery taped to the exterior.



(U//FOUO) The bomb technicians rendered the device safe, and then utilized a field detection unit which identified the unknown filler as potassium chlorate. Potassium chlorate is commonly known to be used in pyrotechnic compositions. The rendered safe device was then processed and packaged for transport to the ATF Laboratory in Ammendale, MD by an ATF Special Agent Certified Explosives Specialist (CES).



Crude TATP

Pure TATP (2)

(U//FOUO) Upon further analysis of the explosives filler, the ATF Laboratory determined that the device actually contained a heterogeneous explosives mixture of Triacetone Triperoxide (TATP), potassium chlorate, potassium nitrate, strontium carbonate, aluminum hydroxide and magnesium. Further examination of the suspect device revealed that the explosive mixture was concealed inside a spherical plastic container, and then covered with an off-white putty-like material (commonly used in wood filler or auto body filler compositions).



Sample of TATP mixture recovered from IED and sent to the ATF Lab to identify. Notice the high concentration of aluminum and the heterogeneous qualities of the mixture (1)

Recommendations

(U//FOUO) It is important to stress the safe handling practices of all unknown explosives, which include the remote handling of those items when possible, as recommended in FBI Special Technician's Bulletin 2009-3.

(U//FOUO) There are a number of publications that address the use of Homemade Explosives (HME) in IEDs. In addition, ATF offers a course for state & local bomb technicians, military EOD, and the military intelligence community which deals with the identification, processing and disposal of HME.

(U//FOUO) As noted in FBI Special Technicians Bulletin 2009-3:

There is no standard desensitization technique that can be instructed upon when dealing with IEs. More importantly, no one desensitization method can be relied upon for even a single IE formulation. For example, explosives change as they age, therefore, one technique might not work as well on aged material as with a newly made IE. Secondly, bombers may add odd things, or uncommon ingredients to IE formulations which ultimately change the render safe approach that needs to be taken. (*eg., the heterogeneous explosive mixture found in the device recovered in Ocean City, Maryland.*) IE formulations are unpredictable at best and their chemistry complicated. The full scope of what is present is not always known or identifiable. (3)

(U//FOUO) When encountering unknown explosives mixtures, be cognizant not to rely solely on detection equipment. It is best practice for the bomb technician or investigator to contact a qualified chemist prior to determining and formulating a plan for mitigating the threat. Detection equipment should be considered as one, but not the only, tool to be used in the identification of unknown energetic materials.

References

1. Bomb Arson Tracking System (BATS) Incident ID #187704 (7/28/09)
2. Indicators and Warnings for Homemade Explosives, Technical Support Working Group, ATF and FBI. (2008)
3. Improvised Explosives - Desensitization, Render Safe Procedures and Disposal, FBI Bomb Data Center Special Technicians Bulletin 2009-3

If you have any questions or information related to this Advisory, please call the U.S. Bomb Data Center at 1-800-461-8841.