

TRIACETONE TRIPEROXIDE (TATP): INDICATORS OF ACQUISITION AND MANUFACTURE, AND CONSIDERATIONS FOR RESPONSE

Terrorists will likely continue to produce and use TATP in IEDs because of readily available and inexpensive precursor materials coupled with widely available instructions, resulting in a persistent threat to public safety and first responders. TATP is a homemade explosive (HME) that has seen widespread illicit use over the last two decades. The first reported terrorist attack using TATP took place in Israel in 1980, and US law enforcement encountered TATP as early as 1983, during an investigation in California. Instructions for making TATP have appeared in a variety of media since that time, including books, magazines, online sources, and terrorist messaging. Continued media reporting on HME, including reports confusing TATP with other types of HME, may also drive interest in TATP.

TATP IDENTIFIERS: TATP, also known as “Mother of Satan” and acetone peroxide, is a semi-stable crystalline solid, extremely sensitive to impact, friction, static electricity, and heat. Pure TATP is white; however, contaminated chemicals or additives can alter the physical appearance and color.

- TATP’s sensitivity makes it extremely dangerous, and even small quantities (1gram) can cause injury and damage if detonated.
- As with other chemicals, TATP can become more sensitive with age, particularly if stored improperly.
- TATP generally smells fruity, like acetone but gentler. Older TATP may smell like vinegar.
- TATP crystals, when stored uncovered, will evaporate over the course of days and weeks.
- TATP stored in a sealed container will evaporate and recrystallize throughout the container, often near the lid, making opening a container of TATP extremely hazardous.
- TATP may make sealed glass containers appear frosted.

GENERAL HME CONSIDERATIONS:

- The effectiveness of instructions found in books, magazines, and online are highly dependent on the accuracy of those instructions and the competence of the would-be explosives maker.
- Most HME chemical precursors have legitimate commercial uses and they are legal, inexpensive, and unregulated; therefore, they may not require identification or licensing, nor raise concerns when purchased.
- Establishing a relationship with businesses selling large quantities of precursor chemicals in your jurisdiction may encourage the business owners and operators to report suspicious activity.
- Understanding of typical quantities of non-commercial precursor chemical purchases may help identify abnormal purchase amounts.
- Interagency coordination and joint training can ensure a unified and effective response to an HME incident.



TATP drying on a room floor



TATP synthesized



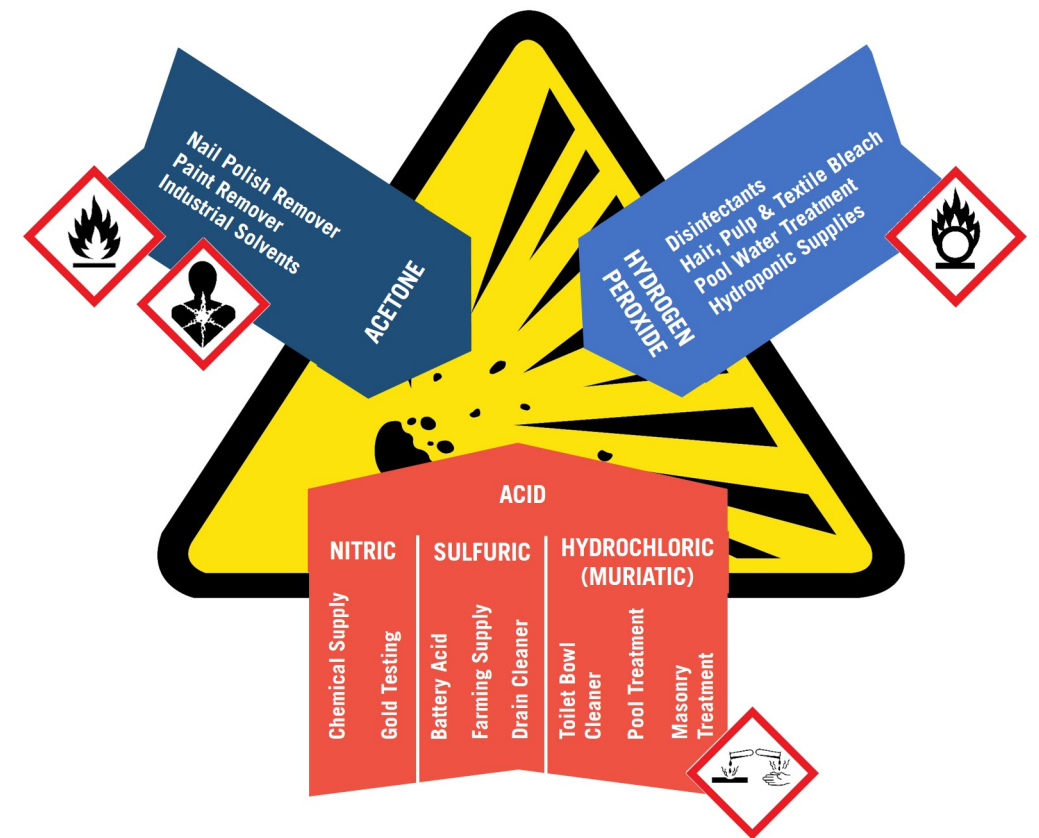
TATP in powder or granular form



TATP in putty or plasticized form

SCOPE: First responders may encounter clandestine efforts to manufacture TATP during the course of their normal duties, including in an emergency response or while performing investigations. Recognizing TATP and its chemical precursors is a critical component of public safety.

PRECURSOR AWARENESS: The three chemical components of TATP are acetone, hydrogen peroxide, and acid. All have varying legitimate uses and their presence alone does not constitute illegal activity.



BOMB THREAT STAND-OFF CARD				
Threat Description	Explosives Capacity	Mandatory Evacuation Distance	Shelter-in-Place Zone	Preferred Evacuation Distance
Pipe Bomb	5 lbs	70 ft	71-1199 ft	+1200 ft
Suicide Bomber	20 lbs	110 ft	111-1699 ft	+1700 ft
Briefcase/Suitcase	50 lbs	150 ft	151-1849 ft	+1850 ft

DHS/DOJ Bomb Threat Stand-off Card: Mandatory Evacuation Distance, Shelter-In-Place Zone, and Preferred Evacuation Distance for a variety of explosives capacities: <https://tripwire.dhs.gov/reports/220482>

WARNING: In addition to following established organizational procedures, personnel should immediately contact the bomb squad and establish standoff distances, upon discovery of suspicious chemicals, evidence of an unauthorized or suspicious chemical process, and the presence of TATP and precursors. Certain precursor chemicals, materials and components, and even the most rudimentary of devices are inherently dangerous and should be treated accordingly, until rendered safe by certified subject matter experts. Public safety personnel should not handle potential TATP due to its volatile nature, unless specifically trained to do so.



NOTICE: This is a Joint Counterterrorism Assessment Team (JCAT) product. JCAT is a collaboration by NCTC, DHS, the FBI, and state, local, tribal, and territorial government personnel to improve information sharing and enhance public safety. The product promotes coordination among intergovernmental authorities and the private sector in identifying, preventing, and responding to terrorist activities. Consider the enclosed information within the context of existing laws, regulations, authorities, agreements, policies or procedures. For additional information contact us at JCAT@NCTC.GOV. **This document is best printed in 11 X 17.**

TRIACETONE TRIPEROXIDE (TATP): INDICATORS OF ACQUISITION AND MANUFACTURE, AND CONSIDERATIONS FOR RESPONSE (continued)

INDICATORS OF ACQUISITION:

- Purchase of abnormally large quantities of precursor chemicals.
- Missing or stolen precursor chemicals.
- Combined purchase of particular chemicals, protective equipment, and tools, particularly by someone exhibiting noteworthy behavioral cues or lack of familiarity.
- Chemical precursor purchases spread across multiple stores in a chain.



TATP Precursors: Purposeful removal of labels on containers or use of non-traditional containers to disguise or conceal chemical precursors.

INDICATORS OF MANUFACTURE: Acetone, acids, and hydrogen peroxide-based formulations are used in TATP manufacture.

- Manufacturing or experimenting with TATP may lead to medical trauma, such as blast injuries and chemical burns.
- Chemical precursors have gaseous byproducts that may have a noxious odor.
- Makeshift laboratories may be found inside apartments, homes, sheds, garages or other residential structures often in the presence of other precursors or a finished HME.
 - Signs of damage, corrosion, or discoloration, including bleaching caused by precursor chemicals.
 - Installation and use of makeshift exhaust and ventilation systems.
 - Presence of store-purchased or makeshift laboratory equipment and tools, including glassware (beakers and flasks), thermometers, mixers, filtration systems, or distillation equipment in unusual locations.
 - Precursor chemicals kept in ice baths and refrigerators.
 - Large areas of a floor in a room or garage seemingly dedicated for drying chemicals.
 - Evidence of common items used in a manner inconsistent with legitimate purpose.
 - Suspicious amount of containers and consumables (rubber gloves, respirators) discarded in trash.

- Improper disposal of chemical precursors.
- Evidence of testing, such as unexplained explosions, damage or injury.

RESPONSE CONSIDERATIONS: If first responders suspect any manufacture of energetic material, consult with your explosive ordnance disposal (EOD) or bomb squad immediately.

- A suspected HME laboratory may contain other explosives and booby traps. **DO NOT** touch, move, or remove suspicious chemicals or materials, as handling may cause injury, damage and contaminate forensic evidence.
- Certain illicit narcotics may resemble TATP. Before field-testing, conduct a thorough threat assessment of the scene, to help rule out HME.
- If field-testing suspected illicit narcotics, carefully follow instructions and procedures using the minimum amount of a sample required for testing, using personal protective equipment, and keeping other personnel at a safe distance.
- If an unknown substance is suspected to be TATP or any HME, wait for EOD or bomb technicians.



TATP stored in a refrigerator

RESOURCES:

- **DHS OFFICE FOR BOMBING PREVENTION** <https://www.dhs.gov/bombing-prevention-training>
- **BOMB MAKING MATERIALS AWARENESS PROGRAM (BMAP)** <https://www.dhs.gov/bmap>
- **TECHNICAL RESOURCE FOR INCIDENT PREVENTION (TRIPwire)** <https://tripwire.dhs.gov/>
- **NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH:** Searchable Material Safety Data Sheet (MSDS) chemical database <https://www.cdc.gov/niosh/npg/>
- **1-855-TELL FBI (835-5324)** will direct callers to specially trained WMD operators. Non-emergency use.

TATP EXAMPLES FROM 2015 TO 2019. The following examples include criminal attacks and plots involving the use of TATP to emphasize the extent of TATP use.



DISRUPTED/FAILED

2019 September, Jakarta, Indonesia – Authorities discovered TATP and other bomb-making materials in a suspected plot targeting police Headquarters.

2019 July, Hong Kong – Police raid uncovered likely TATP on the eve of planned protests.

2018 November, Lake Helen, Florida – Police discovered jars of TATP and a likely makeshift lab for TATP in a house.

2017 June, Brussels, Belgium – A suspect entered Brussels' Central Station and attempted to detonate a TATP device in a luggage trolley but ultimately failed.

2017 June, Huntsville, Alabama – A US person pled guilty to aspiring to use TATP in ISIS-style explosive belt or car bomb.



DETONATION

2018 October, Allentown, Pennsylvania – An individual in a vehicle possibly used TATP to intentionally conduct a murder-suicide.

2018 June, Federal Way, Washington – Law enforcement seized a suitcase with bags TATP following a reported SUV explosion.

2018 May, Surabaya, Indonesia – Terrorists used TATP in multiple attacks against three churches, an apartment complex, and a police headquarters.

2018 March, Beaver Dam, Wisconsin – Police found more than 13 jars of TATP in a refrigerator and bomb instructions, following an investigation into an apartment explosion.

2017 September, London, UK – A crude "bucket bomb" containing TATP partially detonated in a train at Parsons Green Underground Station.

2017 September, Alcanar, Spain – An early assessment indicated TATP was located at a Barcelona attacker's bomb factory following an explosion.

2017 May, Manchester, UK – A suicide bomber detonated a TATP IED during a concert near Manchester Arena.

2016 March, Brussels, Belgium – Terrorists conducted multiple coordinated suicide bombings with TATP at the Brussels Airport and Maalbeek Metro Station.

2015 November, Paris, France – Terrorists conducted coordinated attacks—which included multiple suicide bombers with TATP and mass shootings—targeting a stadium, concert, and cafes and restaurants in Paris.

2015

*Hover over icons for more information



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ADDITIONAL COMMENTS, SUGGESTIONS, OR QUESTIONS.

WHAT TOPICS DO YOU RECOMMEND?

