



# Homeland Security

PRIVATE SECTOR ADVISORY

## (U) Information Regarding Improvised Explosive Devices Described in Recent Extremist Literature

29 August 2014

### (U) Scope

(U//FOUO) This Private Sector Advisory is intended to provide information on the improvised explosive devices (IED) described in a recent publication by al-Malahim Media, al-Qaeda in the Arabian Peninsula's (AQAP's) media and propaganda arm. The information is provided to assist private sector retail, E-commerce, and security personnel in their efforts to help prevent violent extremist activity within the United States.

### (U) Online Extremist Material: Calls to Attack Targets in the United States

(U//FOUO) AQAP has recently released a digital magazine that promotes attacks against targets in the United States. The first half of the 24-page document uses text and imagery to inspire and justify attacks by Westerners in their home countries. The latter half of the magazine focuses on methods for carrying out attacks using IEDs and provides detailed instructions for constructing pressure cooker, pipe bomb, and vehicle-borne IEDs (VBIED).

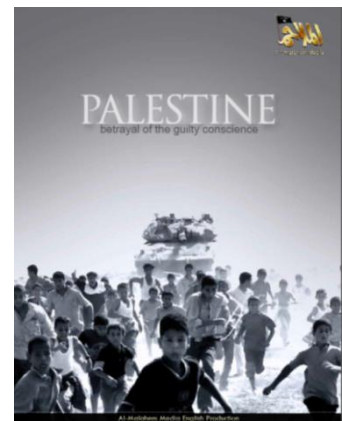


Figure 1: "Palestine" Online Magazine

### (U) Improvised Explosive Devices

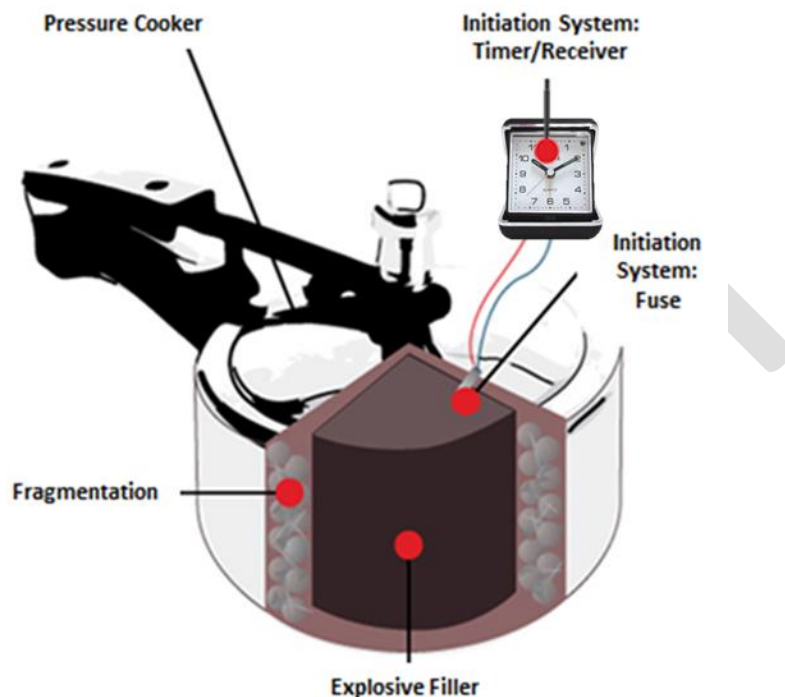
#### (U//FOUO) Pressure Cooker and Pipe Bomb IEDs

(U//FOUO) The recent publication discusses methods for producing pressure cooker and pipe bomb IEDs. The magazine calls attention to the ease of production of these devices, as well as their effectiveness, highlighting their use in the 2013 Boston Marathon bombings. These types of explosive devices are fairly easy to construct and the components required are readily available.

(U//FOUO) The recent publication provides readers with instructions to construct pressure cooker and pipe bomb IEDs using the following components:

- » Common pressure cookers or short lengths of pipe (with end-caps) serving as containment vessels
- » Explosive filler such as:
  - » home-made explosives;
  - » black powder, smokeless powder, or smokeless powder substitutes;
  - » the contents of fireworks;
  - » match heads

- » Fragmentation such as:
  - » nails;
  - » nuts and bolts;
  - » ball bearings;
  - » other metal materials or scrap
- » Improvised initiation system using:
  - » hobby fuse;
  - » modified miniature light bulb connected to a modified clock or timer serving as a switch and providing a delay function.
- » Power source such as a 9-volt battery



**Figure 2: Improvised Explosive Device (IED)**  
Source: e-Canada Now

#### (U//FOUO) Vehicle-Borne IEDs (VBIEDs)

(U//FOUO) VBIEDs utilize motorized means to deliver explosive payloads to an intended target. This method of delivery allows a perpetrator to significantly increase the amount of explosives employed in an attack, thus greatly enhancing its destructive power.

(U//FOUO) The recent publication provides readers with instructions to construct a VBIED using the following components:

- » Propane tanks as containment vessels
- » Oxygen or acetylene as enhancers
- » Fragmentation such as:
  - » nails;
  - » nuts and bolts;
  - » ball bearings; or
  - » other metal materials or scrap

- » Improved initiation system using a modified miniature light bulb connected to a modified clock or timer serving as a switch and providing a delay function
- » Power source such as a 9-volt battery or 12-volt car battery

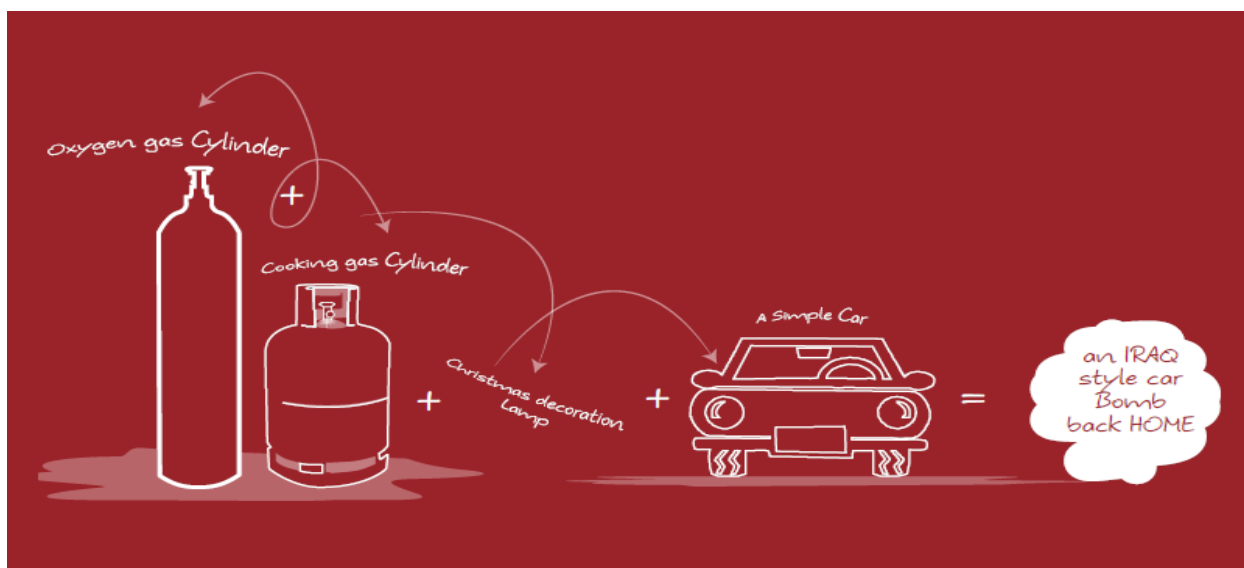


Figure 3: Graphical instructions of a Vehicle-Borne Improvised Explosive Device from extremist literature.  
Source: "Palestine" Online Magazine

#### (U) Acquisition Sources: Explosive Precursors and Select IED/VBIED Components

(U//FOUO) The acquisition of materials for improvising explosives and manufacturing devices is a necessary stage in the execution of any IED attack. However, the acquisition phase offers an opportunity for detection and disruption of plots. Thus, it is critical that point-of-sale employees are trained to recognize indicators of suspicious purchases and behavior.

(U//FOUO) The following table provides a breakdown of select explosive precursors and other IED components, along with their common usage and likely points of sale.

Chemical / Component	Commercial Uses		Retail Source	
Homemade Explosive Mixtures				
Potassium Chlorate	<ul style="list-style-type: none"><li>Pyrotechnics</li><li>Herbicides</li></ul>	<ul style="list-style-type: none"><li>Oxygen candles</li><li>Matches</li></ul>	<ul style="list-style-type: none"><li>Fireworks supply stores</li><li>Chemical supply stores</li></ul>	<ul style="list-style-type: none"><li>Grocery stores</li><li>Hardware supply stores</li></ul>
Sodium Chlorate	<ul style="list-style-type: none"><li>Herbicides</li><li>Bleaching pulp</li><li>Pyrotechnics</li></ul>		<ul style="list-style-type: none"><li>Fireworks supply stores</li><li>Chemical supply stores</li><li>Agricultural supply stores</li></ul>	
Hydrogen Peroxide	<ul style="list-style-type: none"><li>Bleaching pulp and textiles</li><li>Bleaching hair</li><li>Disinfectants</li></ul>	<ul style="list-style-type: none"><li>Environmental clean-up</li><li>Pool water softeners</li><li>Therapeutic health baths</li></ul>	<ul style="list-style-type: none"><li>Drug stores (under 8% concentrations)</li><li>Beauty supply stores (to approximately 35% concentrations)</li><li>Internet (up to 35% concentrations)</li><li>Chemical supply stores (up to 98% concentrations)</li></ul>	
Acetone	<ul style="list-style-type: none"><li>Fingernail polish remover</li><li>Paint remover</li><li>Glassware cleaner for college and high school labs</li><li>Laboratory and industrial solvent</li></ul>		<ul style="list-style-type: none"><li>Beauty supply stores</li><li>Chemical supply stores</li><li>Drug stores</li></ul>	<ul style="list-style-type: none"><li>Hardware supply stores</li><li>Paint supply stores</li><li>Household supply stores</li></ul>

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Chemical / Component	Commercial Uses	Retail Source
Sulfuric Acid	<ul style="list-style-type: none"> <li>• Drain pipe cleaners</li> <li>• Automotive batteries</li> <li>• Polymer manufacture</li> <li>• Fertilizer manufacture</li> <li>• Chemical manufacture</li> <li>• Oil refining</li> </ul>	<ul style="list-style-type: none"> <li>• Automotive supply stores</li> <li>• Chemical supply stores</li> <li>• Industrial supply stores</li> </ul>
Hexamine	<ul style="list-style-type: none"> <li>• Camp stove fuel tablets</li> <li>• Antibiotics</li> <li>• Military explosives</li> <li>• Pyrotechnics</li> </ul>	<ul style="list-style-type: none"> <li>• Hardware supply stores</li> <li>• Camping / Army surplus stores</li> <li>• Chemical supply stores</li> <li>• Pyrotechnic supply stores</li> </ul>
Citric Acid	<ul style="list-style-type: none"> <li>• Food Additives</li> <li>• Water Softeners</li> </ul>	<ul style="list-style-type: none"> <li>• Pharmacies</li> <li>• Health food stores</li> <li>• Chemical supply stores</li> </ul>
Methyl Ethyl Ketone (MEK)	<ul style="list-style-type: none"> <li>• Paint removers</li> <li>• Laboratory and industrial solvents</li> <li>• Plastics manufacture</li> </ul>	<ul style="list-style-type: none"> <li>• Hardware stores</li> <li>• Chemical supply stores</li> </ul>
Ammonium Nitrate (AN)	<ul style="list-style-type: none"> <li>• Fertilizers</li> <li>• Explosives</li> <li>• First aid cold packs</li> <li>• Exploding targets</li> </ul>	<ul style="list-style-type: none"> <li>• Farm &amp; feed stores</li> <li>• Agriculture supply stores</li> <li>• Chemical supply stores</li> <li>• First aid supplies</li> <li>• Sporting goods stores</li> </ul>
Nitromethane	<ul style="list-style-type: none"> <li>• Racing car fuel</li> <li>• Remote control vehicle fuel</li> <li>• Industrial solvent</li> <li>• Propellants and explosives</li> </ul>	<ul style="list-style-type: none"> <li>• Chemical supply stores</li> <li>• Racing fuel supply stores</li> <li>• Remote control hobbyist stores</li> </ul>
Aluminum Powder	<ul style="list-style-type: none"> <li>• Paints</li> <li>• Pyrotechnics</li> <li>• Manufacture of engines, cars, structural members, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Hardware supply stores</li> <li>• Paint supply stores</li> <li>• Chemical supply stores</li> <li>• Pyrotechnic stores</li> </ul>
Urea	<ul style="list-style-type: none"> <li>• Fertilizers</li> <li>• Road de-icers</li> <li>• Food supplement</li> <li>• Manufacture of plastics</li> <li>• Diesel exhaust fluid</li> </ul>	<ul style="list-style-type: none"> <li>• Agricultural supply stores</li> <li>• Hardware supply stores</li> <li>• Automotive supply stores</li> </ul>
Nitric Acid	<ul style="list-style-type: none"> <li>• Rocket Propellants</li> <li>• Explosives Manufacture</li> <li>• Fertilizer Manufacture</li> <li>• Laboratory and industrial processes</li> </ul>	<ul style="list-style-type: none"> <li>• Chemical supply stores</li> </ul>
Pentaerythritol	<ul style="list-style-type: none"> <li>• Medical use</li> <li>• Resins</li> <li>• Varnishes</li> <li>• Polyvinyl chloride (PVC)</li> </ul>	<ul style="list-style-type: none"> <li>• Chemical supply stores</li> </ul>
<b>Explosive Powders</b>		
Black powder, smokeless powder, and black powder substitutes	<ul style="list-style-type: none"> <li>• Firearms propellant/gunpowder</li> <li>• Fuses</li> <li>• Pyrotechnics</li> <li>• Special blasting applications</li> <li>• Military salute charges and ordnance</li> </ul>	<ul style="list-style-type: none"> <li>• Hardware supply stores</li> <li>• Household supply stores</li> <li>• Sporting goods stores</li> </ul>
Fireworks	<ul style="list-style-type: none"> <li>• Fireworks displays / entertainment</li> </ul>	<ul style="list-style-type: none"> <li>• Fireworks supply stores</li> <li>• Fireworks supply stands</li> </ul>
<b>Propane Tanks and Compressed Gas Cylinders</b>		
Propane Tanks	<ul style="list-style-type: none"> <li>• Cooking</li> <li>• Heating</li> </ul>	<ul style="list-style-type: none"> <li>• Grocery stores</li> <li>• Gas stations</li> <li>• Hardware supply stores</li> </ul>
Compressed Gas Cylinders (Oxygen or Acetylene)	<ul style="list-style-type: none"> <li>• Cutting and welding</li> <li>• Medical</li> <li>• Diving</li> </ul>	<ul style="list-style-type: none"> <li>• Hardware supply stores</li> <li>• Medical supply store</li> <li>• Dive supply store</li> </ul>

*\*This chart is a quick reference guide describing homemade explosive precursor chemicals and other IED components, their common uses, and associated retail sources. The examples in this guide were selected based on historical incidents and information available. Given the variety of commercial materials available for the manufacture of homemade explosives, this chart should not be considered all inclusive.*

TABLE 1.

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## (U) Indicators of Suspicious Purchasing Behavior

(U//FOUO) The following indicators are provided to assist retail point-of-sale employees in recognizing suspicious purchases of explosive precursors and IED/VBIED components.

Note: There are numerous legitimate uses for the equipment and products discussed. Purchase or possession of such is not necessarily an independent indicator of criminal activity and should be evaluated in the context of the situation to determine if suspicious. Multiple indicators increase the likelihood of criminal intent.

- » (U//FOUO) Purchasing abnormally high quantities of a product
- » (U//FOUO) Making multiple purchases within a short period of time
- » (U//FOUO) Making large purchases of fireworks during atypical times of the year
- » (U//FOUO) Vague knowledge of the proper/legitimate use(s) for the product
- » (U//FOUO) Exhibiting nervous or evasive behavior
- » (U//FOUO) Wearing a conspicuous disguise
- » (U//FOUO) Insisting on in-store pick-up for bulk purchases
- » (U//FOUO) Making large cash purchases
- » (U//FOUO) Insisting on shipment to a home address rather than a business
- » (U//FOUO) Refusing to purchase or accept substitute product(s)
- » (U//FOUO) Using third-party freight forwarding
- » (U//FOUO) Asking questions not relevant to the lawful or proper use of the product
- » (U//FOUO) Expressing interest in bomb-making or engaging in violent activity
- » (U//FOUO) Displaying injuries consistent with explosives experimentation (e.g. missing fingers or scarring, red or irritated eyes, and discoloration or burns on skin)

## (U) Suspicious Activity Reporting

### (U) Report Suspicious Activity

**(U) To report suspicious activity, call 911 or contact local law enforcement.** Suspicious Activity Reports (SARs) will be forwarded to the appropriate fusion center and FBI Joint Terrorism Task Force for further action. For more information on the Nationwide SAR Initiative, visit <http://nsi.ncirc.gov/resources.aspx>.

## (U) Resources

### (U) Retail Sector/Bomb-making Materials Awareness

(U) DHS offers security awareness training designed to raise awareness for retail employees. FEMA's EMI Course IS-912, "Retail Security Awareness: Understanding the Hidden Hazards" can be accessed at: <https://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=is-912>.

(U) The Bomb-making Materials Awareness Program (BMAP), a partnership between the DHS Office for Bombing Prevention and the Federal Bureau of Investigation (FBI), aims to increase point-of-sale employee awareness and suspicious activity reporting to prevent illicit use of explosive precursor chemicals and components commonly used in IEDs. Additional BMAP information and outreach products can be accessed at: <https://tripwire.dhs.gov/IED/resources/docs/BMAP%20cards%20rev%20A.pdf>.

(U) Additional Resources

(U) DHS's Office for Bombing Prevention (OBP) provides additional counter-IED information sharing, capability analysis and planning support, and training to State, local, and private sector partners to enhance their capabilities to prevent, protect against, respond to, and mitigate bombing threats and incidents. For more information on OBP's programs, products, and services, visit: <https://OBP.dhs.gov> or contact: [OBP@dhs.gov](mailto:OBP@dhs.gov).

(U) Administrative Note:

(U//FOUO) Information contained in this awareness advisory is for official use only. No portion of this bulletin should be released to the media or the general public. Release of this material could adversely affect or jeopardize investigative activities.

(U) For comments or questions related to the content or dissemination of this document, please contact the DHS Office for Bombing Prevention at [OBP@dhs.gov](mailto:OBP@dhs.gov).