

### **ABOUT THIS GUIDE**

This Recognition Guide contains images of HME related materials and manufacturing components and provides a list of common indicators (observable that when found, indicate a high probability of HME related activity.

> Features: Lab Indicators **Workshop Indicators Bulk Explosives**

**IED Components** 

**Safety Precautions** 

PROBABILITY OF HME PRODUCTION ACTIVITY INCREASES WHEN ONE OR MORE COMPONENTS AND/OR INDICATORS ARE FOUND AT THE SAME LOCATION.

If any indicators are present at a given location, persons associated with the area should be questioned and potentially detained.

Refer to this material if something looks suspicious, out of place, or out of character.

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### FERTILIZER BAGS

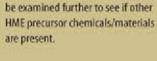


UREA: Widely distributed by NGOs for use by farmers. When mixed with nitric or sulfuric acid, can be made into HME/BE with significant time and effort.

Understanding the numbers on the bag: Amount of potassium:0 Amount of phosphorus: 0

Amount of nitrogen: 46%

 Stockpiling urea and Diammonium Phosphate (DAP) is not uncommon for farmers for planting seasons. Note: DAP is not an HME precursor. A quantity of 300kg (6 bags) of any fertilizer for a single farmer should



Note: Bags are



#### COMMON LABELS

Selected fertilizer bag labels







Many AN fertilizer bags have green labels and are produced in Pakistan.



Fatima fertilizer is often packaged in lime-green bags with blue logos such as those shown here.



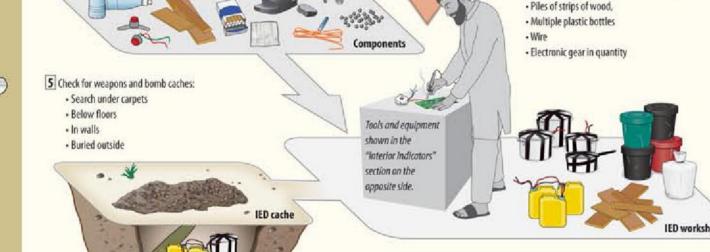
#### **RECOGNIZE, UNDERSTAND AND INTERRUPT IEDS**

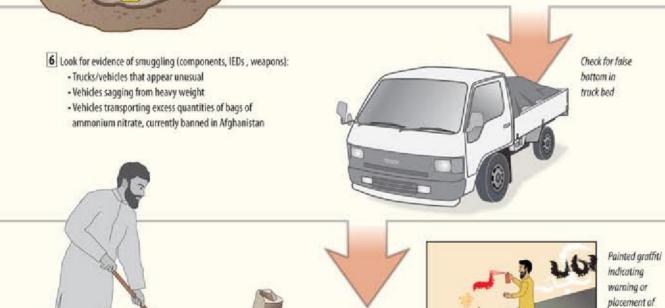
Recognizing the components of IED and HME production is critically important to your safety—as well as those around you. Be aware of the bomb-making process as you survey a scene. Here's what to look for:

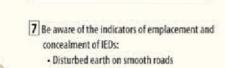












an IED

- · Abandoned vehicles Stray protruding wires
- · Choke points on roads
- · Locals using video cameras or binoculars for surveillance

#### PRECURSORS, FERTILIZERS, FILLERS AND FUELS

# LEGEND

Chemical/industrial



Commercial uses





No ador



Agriculture







Contains 46%





Urea fertilizer is legal for farm use in Afghanistan and is not the same material as urea nitrate an explosive. Urea fertilizer can, however, be a precusor for making urea nitrate. (See the nitric acid panel)



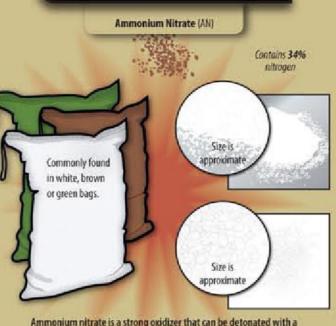




FUEL







FERTILIZER

Ammonium nitrate is a strong oxidizer that can be detonated with a booster. It is usually mixed with a liquid fuel, powdered sugar, or aluminum powder to increase its explosive power.







#### PRECURSOR CHEMICAL



Nitric acid can be mixed with urea fertilizer to make the explosive: urea nitrate. Look for multiple jugs of nitric acid and for yellow-green, or brownish stains on the skin, especially the hands.

**FUELS AND FILLERS** 











in white bags

and/or metal

drums.



Potassium chlorate mixed with sugar is the second-most common

HME used in Afghanistan. Potassium chlorate is often crushed into

a powder to increase its surface area.

**FERTILIZER** 

Calcium Ammonium Nitrate (CAN)

Calcium ammonium nitrate is also a strong oxidizer that can be detonated

with a booster. It is "cooked" in boiling water to separate the calcium from

the ammonium nitrate which creates a strong ammonia odor.

PRECURSOR CHEMICAL

Potassium Chlorate (KClO<sub>3</sub>)

in white and/or

brown bags.

Contains 26-27%



## HME FIELD TESTING

- Only qualified and trained individuals should handle HME or precursors. • Treat Unknown Bulk Explosive (UBE) as HME until the explosive has
- been positively identified.
- osive samples should be placed inside a certified laborator static-free container or bag only.
- Do not add any substance to suspected HME or HME precursors unless you can positively identify item/compound. If mixed with other chemicals, HME can spontaneously detonate.

#### IDEX Series Identifier Kits

- Individual test kits use sampler tips to detect explosives made from nitro-aromatics, ammonium-based precursors, urea nitrate, chlorates, perchlorates, nitrates, phosphates, and acetic anhydride.

#### Elite™ EL100 Disposable Explosives Detection Card

· Features sensitivity to all nitrogen-based explosives, including TNT, tetryl, RDX, ANFO, black powder, as well as bromate mixtures.

#### Elite™ EL240 Disposable Explosives Detection Pen

 Detects peroxide-based explosives such as TATP, HMTD, MEKP and concentrated hydrogen peroxide solutions. Detects and differentiates chlorate and bromate mixtures.

# Expray Explosive Detection Kit

- Aerosol-based colorimetric field test kit for the detection and identification of Group A explosives (TNT, TNB, etc.), Group B explosives (Semtex H, RDX, C4, etc.) and compounds containing inorganic nitrates used in improvised explosives (ANFO).

#### SAFE-T Explosive Wipes, Spray, Films, Pens and Kits

- Used to detect harmful toxins, chemical agents, poisons, pesticides and explosives.

# COUNTER-IED GUIDE

Visual Recognition of IED and HME Indicators



Attack the Network | Defeat the Device | Train the Force

#### WARNINGS

IEDs CAN BE VERY SENSITIVE AND UNPREDICTABLE AND CAN BE AS STRONG AS MILITARY EXPLOSIVES.

- Expose HME or precursor chemicals to heat.
- shock, flame, spark or friction. - Smoke near HME or precursor chemicals.
- Conduct a "burn test."
- Touch HME or precursors. - Cut open any containers.

or precursors.

- Take any samples.
- · Stay in a confined area with HME or precursors. - Walk on or apply unnecessary pressure on HME

Stay out of Line-of-Sight (LOS) of the HME---if you can

- see it then it can see you. - Back out using the same path; move and stay upwind if tactically possible.
- If any unknown materials are encountered in an uncertain state of assembly or condition, it may be advisable to consider taking detailed photography and report notes only and let trained EOD technicians determine if the item is safe to handle and/or ship.

# **HAZARDS**

THINK BEFORE APPROACHING HMEs! REMEMBER TO LOOK AT THE TOTALITY OF THE CIRCUMSTANCES!

#### All HMEs are potentially hazardous to eyes, skin, lungs, nervous system.

- All explosives are sensitive to heat, shock, friction and electrostatic discharge. Sensitivity varies based on the type of explosive.
- All HMEs are explosives and most are unstable.
- Mishandling can result in bodily harm or death.
- CALL EOD IN THE PRESENCE OF HME.
- DO NOT attempt to render safe
- DO NOT attempt to disrupt IED DO NOT open any containers
- DO NOT dispose of IED
- DO NOT handle suspected HME/BE DO NOT touch if:
  - it looks suspicious - it looks out of place
  - it looks out of character
- you don't know what it is or does