

Chemical Analysis of Exploding Targets

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Forensic Science Laboratory – San Francisco**



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EXPLODING TARGETS

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Over the past few months, ATF Agents have contacted the Forensic Lab to inquire about the chemical components of various exploding targets. To assist Agents with their inquiry, exploding targets were purchased (September 2012 to October 2012) from numerous distributors and chemically analyzed.

All exploding targets contain an oxidizer and a fuel (catalyst). When these two components are properly mixed, the resulting mixture becomes a shock sensitive explosive.

The exploding target oxidizers and fuels were analyzed using Infrared Spectroscopy, Scanning Electron Microscope / Electron Dispersive Spectroscopy (SEM/EDS), and X-Ray Diffraction.

All analysis was supervised by Forensic Chemist John Jermain. For additional questions and information, contact John at 925.280.3607.

Additional studies dealing with exploding targets will be conducted by Forensic Chemist Brittany Crane and will be published at a later date.





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ATLAS AMMO

Exploding Targets

PURCHASED: October 2012

OXIDIZER: Potassium Perchlorate

FUEL (CATALYST): Aluminum



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BLUE THUNDER

Low Velocity Exploding Targets

Blue Thunder

sales@bluethunderonline.com

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum
(3 TIMES AMOUNT OF THE HIGH VELOCITY)



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BLUE THUNDER

High Velocity Exploding Targets

Blue Thunder

sales@bluethunderonline.com



PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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DA-5

Exploding Rifle Targets

Last Man Standing

PO Box 1172

Temperance, Michigan 48182

419.855.BANG

PURCHASED: September 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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DA-22

Exploding Rimfire Targets

Last Man Standing

PO Box 1172

Temperance, Michigan 48182

419.855.BANG

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum
(3 TIMES AMOUNT OF THE DA-5)



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H2 TARGETS

Exploding Rifle Targets

H2Targets, LLC
info@h2targets.com

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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H2 TARGETS

"Boomer"

.22 Long Exploding Rifle Targets

H2Targets, LLC

info@h2targets.com

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum
(3 TIMES AMOUNT OF STANDARD H2 TARGETS)



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KICK-ASS

"ORIGINAL"

Exploding Rifle Targets

Kick-Ass Exploding Targets
www.kickasstargets.com

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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KICK-ASS

"ATX-MAGNUM"
Exploding Rifle Targets

Kick-Ass Exploding Targets
www.kickasstargets.com

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum &
Sulfur (TRACE AMOUNTS)



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KICK-ASS

"ATX-1"

Exploding Rifle Targets

Kick-Ass Exploding Targets
www.kickasstargets.com

PURCHASED: October 2012

OXIDIZER: Potassium Perchlorate

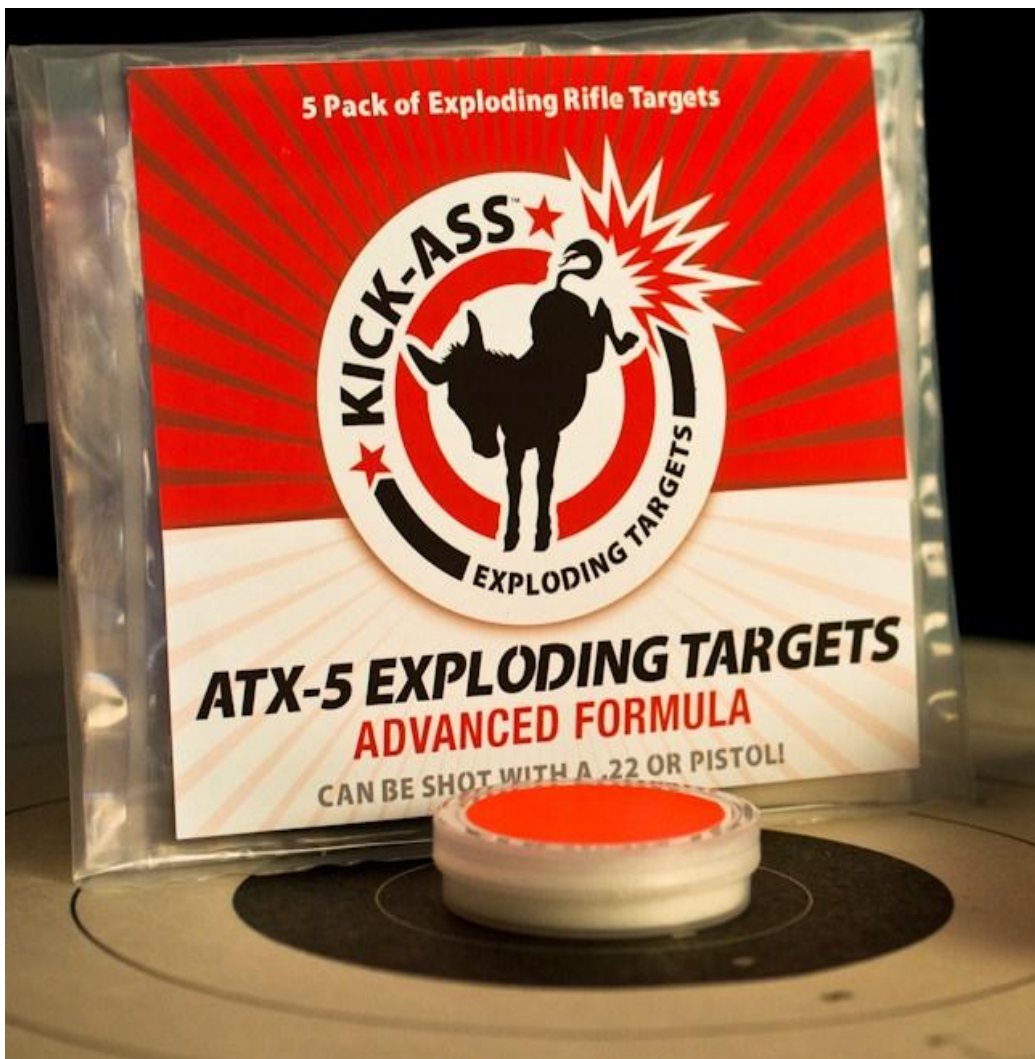
FUEL (CATALYST): Aluminum &
Sulfur (TRACE AMOUNTS)



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KICK-ASS

"ATX-5"

Exploding Rifle Targets

Kick-Ass Exploding Targets

www.kickasstargets.com

PURCHASED: October 2012

OXIDIZER: Potassium Perchlorate

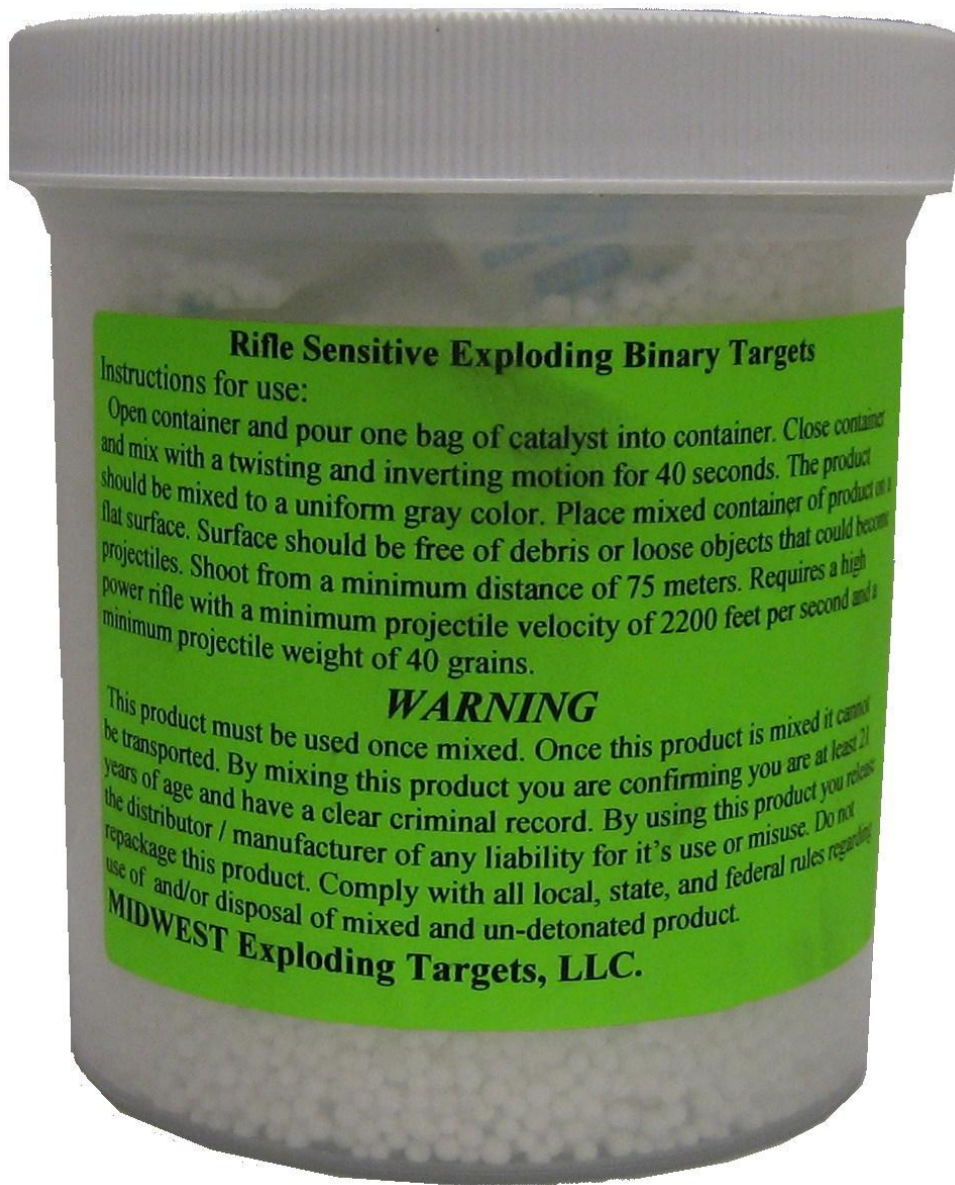
FUEL (CATALYST): Aluminum &
Sulfur



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MIDWEST

Exploding Rifle Targets

Midwest Exploding Targets
West Fargo, North Dakota
701.219.0264

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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RED JACKET

"MOJO MIX"

Exploding Centerfire Rifle Targets

Red Jacket Firearms, LLC
9653 Mammoth Avenue
Baton Rouge, Louisiana 70814
800.951.1319

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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RED JACKET

"SUPER MOJO MIX"

Exploding Rimfire Rifle Targets

Red Jacket Firearms, LLC
9653 Mammoth Avenue
Baton Rouge, Louisiana 70814
800.951.1319

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Magnalium
(MIXTURE OF MAGNESIUM AND ALUMINUM)



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SHOCKWAVE

Exploding Rifle Targets

Shockwave Targets
499 Spruce Street
St. Marys, Pennsylvania 15857
814.834.2010

PURCHASED: September 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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SPIKE'S TACTICAL

Exploding Rifle Targets

Spike's Tactical LLC
2593 Clark Street #103
Apopka, Florida 32703
407.928.2666

PURCHASED: September 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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STAR TARGETS

Exploding Rifle Targets

Star Targets
info@startargets.com



PURCHASED: September 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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STAR TARGETS

Rimfire Exploding Rifle Targets

Star Targets
info@startargets.com

PURCHASED: September 2012

OXIDIZER: Potassium Perchlorate

FUEL (CATALYST): Aluminum &
Sulfur (TRACE AMOUNTS)



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SURE SHOT

Exploding Rifle Targets

Sure Shot Exploding Targets
6350-A South Hanover Road
Elkridge, Maryland 21075
410.796.5996

PURCHASED: September 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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SURE SHOT

"MAGNUM"

.22 Long Exploding Rifle Targets

Sure Shot Exploding Targets
6350-A South Hanover Road
Elkridge, Maryland 21075
410.796.5996

PURCHASED: September 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Magnalium
(MIXTURE OF MAGNESIUM AND ALUMINUM)



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TANNERITE

Exploding Rifle Targets

Tannerite
36366 Valley Road
Pleasant Hill, Oregon 97455
541.744.1406

ACQUIRED: **June 2010**

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum &
Zirconium



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TANNERITE

Exploding Rifle Targets

Tannerite
36366 Valley Road
Pleasant Hill, Oregon 97455
541.744.1406

PURCHASED: **September 2012**

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum
(ZIRCONIUM NO LONGER IN FUEL FORMULA)



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WHITE LIGHTNING

Rimfire Exploding Rifle Targets

Tannerite

36366 Valley Road

Pleasant Hill, Oregon 97455

541.744.1406

PURCHASED: September 2012



OXIDIZER: Potassium Perchlorate

FUEL (CATALYST): Aluminum



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ZOMBOOM!

Exploding Rifle Target

Zombie Industries

12925 Brookprinter Place, Suite 200

Poway, California 92064

858.386.0950

PURCHASED: October 2012

OXIDIZER: Ammonium Nitrate

FUEL (CATALYST): Aluminum



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