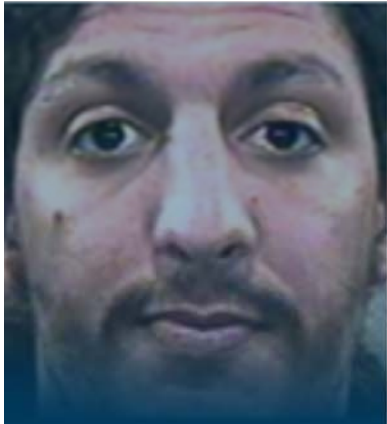




Can the Government Mitigate the Use of Common Household Products for use in Explosives?



Richard Reid
"Shoe Bomber"

2001



**London
Bombing**

2005



**Paris
Bombing**

2015



Brussels

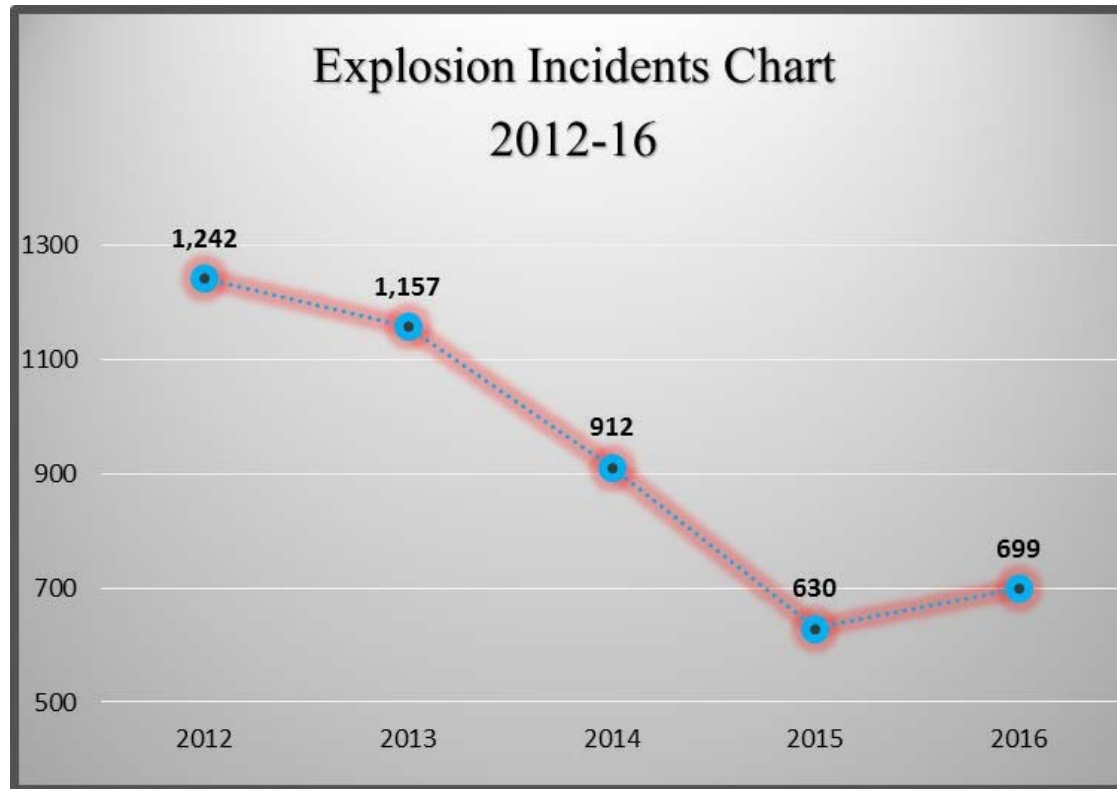
2016



**Parsons
Green
London, UK**

2017

US Explosive Incidents



Data from USBDC Report 2016

Common Household Products Used as Improvised Explosive Fillers

- Nail polish remover (acetate) + antiseptic (hydrogen peroxide) = Triacetone Triperoxide, an incredibly sensitive mixture that will detonate from shock, friction, heat, static electricity or just because it is Wednesday.
- Fertilizer (ammonium nitrate) and diesel fuel (any fuel will work i.e. aluminum powder, sugar, brake fluid, etc.) = a common blasting agent requiring a booster to initiate. In the past a frequent component of vehicle borne improvised explosive devices
- Pool chlorine (HTH) + Brylcreem hair gel = incendiary
- Fish tank cleaner (potassium permanganate) + glycerin = incendiary, immediate ignition
- Chlorate/perchlorate mixtures: chlorine commonly used in bleach and perchlorates used in fireworks = incendiary

Explosion Main Charges

Material Subtype Description	2012	2013	2014	2015	2016	Total
Ammonium Nitrate/Prills	9	6	5	10	4	34
ANFO (Blasting Agent)	2	1		0	0	3
Binary Explosives	1	15	11	9	9	45
Black Powder	34	28	20	18	21	121
Black Powder Substitutes	5	11	7	5	10	38
Blasting Agent	1	0	1	0	0	2
Booster	9	1	1	0	0	11
Chlorate/Perchlorate Mixtures	45	7	2	2	6	62
Composition C4	7	0	0	0	0	7
CS/OC Grendade (LE)	0	0	0	0	1	1
Delay Mix	1	5	0	0	0	6
Dry Ice	38	20	22	10	6	96
Dynamite	0	0	1	0	0	1
Emulsion (Blasting Agent)	1	1	1	0	0	3
Flash Powder/Pyrotechnic Mixture	114	81	63	44	46	348
Flashbang/Distracton (LE)	0	1	0	0	0	1
HMTD	1	1	2	0	1	5
Hydrogen Peroxide Mixtures	2	0	2	0	1	5
Ignitable Gas	4	8	9	10	8	39
Ignitable Liquid	12	11	6	3	7	39

Material Subtype Description	2012	2013	2014	2015	2016	Total
Ignitable Solid	1	1	1	0	0	3
Ignition Mix	0	2	1	0	0	3
Liquid Explosive	2	1	0	0	0	3
Magnesium	2	1	0	0	1	4
Match Heads	1	0	1	0	3	5
MEKP	0	0	0	0	1	1
Nitro Carbo Nitrate	0	0	0	0	1	1
Ordnance	0	0	0	1	0	1
Other (Not Identified)	61	36	11	11	6	125
Pellet Powder	0	1	1	0	0	2
PETN	0	0	1	2	0	3
Primer	0	0	0	2	1	3
Propellant	4	1	2	1	2	10
Pyrotechnics/Fireworks	158	133	134	115	126	666
RDX	0	1	1	0	0	2
Seal Bomb	1	1	0	0	0	2
Signaling Device	1	0	1	0	1	3
Smokeless Powder	26	21	10	11	20	88
TATP	2	0	2	1	4	9

Data from USBDC Report 2016

Explosion Recovery Charges

Material Type	2012	2013	2014	2015	2016	Total
Ammonium Nitrate/Prills	22	21	19	21	24	107
ANFO (Blasting Agent)	19	13	16	17	9	74
Binary Explosives	28	31	47	46	49	201
Black Powder	236	200	220	182	210	1048
Black Powder Substitutes	76	72	74	77	79	378
Blasting Agent	13	7	6	5	5	36
Booster	37	25	39	22	30	153
Chlorate/Perchlorate Mixtures	30	17	12	18	15	92
Composition B	7	3	7	7	8	32
Composition C3	1	2	0	2	0	5
Composition C4	31	23	34	31	30	149
CS/OC Grenade (LE)	0	3	21	17	12	53
Delay Mix	2	1	1	2	1	7
Dry Ice	5	4	6	5	2	22
Dynamite	157	157	154	128	101	697
Emulsion (Blasting Agent)	18	23	41	8	19	129
Flash Powder/Pyrotechnic Mixture	0	1	6	7	5	19
Flashbang/Distracton (LE)	0	1	6	7	5	19
HMTD	2	4	2	4	6	18
Hydrogen Peroxide Mixtures	1	2	0	2	0	5
Ignitable Gas	8	9	1	7	5	30
Ignitable Liquid	107	89	91	72	81	440
Ignitable Solid	23	17	18	16	12	86
Ignition Mix	0	3	2	1	1	7
Liquid Explosive	2	2	3	1	3	11
Magnesium	4	2	1	2	2	11

Material Type	2012	2013	2014	2015	2016	Total
Match Heads	12	11	5	4	12	44
Nitro Carbo Nitrate	2	0	0	0	0	2
Nitroglycerine	4	6	6	8	4	28
Ordnance	8	2	6	13	2	31
Other (Not Identified)	101	67	51	60	71	350
Pellet Powder	7	7	5	2	2	23
Perforator	13	11	12	14	9	59
Perforator Oil Well Gun Assembly	0	8	5	0	1	14
PETN	13	13	7	3	6	42
Picric Acid	21	21	16	12	13	83
Primer	15	13	10	5	2	45
Propellant	7	15	5	12	9	48
Pyrotechnics/Fireworks	704	721	593	590	627	3235
RDX	6	2	6	8	7	29
Seal Bomb	11	11	13	15	4	54
Shape Charge	4	3	9	7	4	27
Sheet Explosive	9	10	11	6	12	48
Signaling Device	34	25	29	37	40	165
Simulator	16	23	18	20	25	102
Slurry (Blasting Agent)	26	21	17	12	8	84
Smoke Grenade (LE)	0	2	8	13	16	39
Smokeless Powder	183	205	184	163	200	935
Spent Shell (Canine only)	0	0	0	1	0	1
TATP	6	8	3	4	5	26
TNT	29	17	31	16	22	115
Urea Nitrate	0	1	0	1	1	3
Water Gel (Blasting Agent)	5	5	2	0	2	14

Data from USBDC Report 2016

USA, Australia & the United Kingdom's Risk Mitigation Programs

- Tripwire – US
- “Chemicals of Concern” – Australia
- United Kingdom
- Successes.....

A Collaborative Opportunity to Mitigate the Risk

- Inclusion of industry at the onset = a more cooperative enterprise and improved results
- Regulatory system = more consistent and complete reporting of suspicious events
- Reporting guidelines for industry including industry feedback
- Develop awareness materials for manufacturers, distributors and wholesalers
- A consensus between government and industry down to the most practical level
- “Hotline” including an operations center to receive and document all information; and analyze & vet incoming information
- Program to distribute industry produced information to the appropriate agencies
- Exchange feedback between industry and government
- Maintain OPSEC. Minimal public information will mitigate countermeasures by illicit producers.

INTERPOL in the Global Collaborative Effort

- Use of INTERPOL to coordinate information sharing between all nations involved in a collaborative effort could be very effective in efforts to mitigate use of common products in explosive devices. INTERPOL's law enforcement/security related focus appears to be a natural "fit" for this process.
- If INTERPOL is the chosen vehicle, the United States National Central Bureau (USNCB) could act as the clearinghouse for information and incident reporting coming in from individual INTERPOL members and pushing that information out to US agencies.
- Each of the 192 INTERPOL offices would push international information down to their local law enforcement agencies and through whatever national programs they have for chemical information reporting.
- INTERPOL currently issues "Purple Notices" on explosive incident reports they receive from other countries to law enforcement agencies within the US and vice versa. This vehicle could work for distributing draft programs with participating nations.

The Way Forward

- Common chemical precursors used in making explosives is on the rise globally
- The time is ripe for a more globally coordinated reporting program that will benefit all nations and help thwart the increasing number of explosives incidents involving the use of common household chemicals.
- An international focus on this aspect of security threats allows for the rapid dissemination of new tactics, techniques and procedures allowing for more effective and rapid development and implementation of security countermeasures.
- With involvement and collaboration in this effort at an international level, the information shared would greatly reduce the effectiveness of criminal and terrorist organizations utilizing these products for their criminal undertakings; and save lives and property.

ENVISTACOM

TRUST/AGILITY/RESULTS

Making the World a Safer Place

Questions?

