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# ATF Fireworks Classification & Exemptions



**U.S. Department of Justice**

Bureau of Alcohol, Tobacco, Firearms and Explosives

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# ATF Classification

- Is it an explosive material?
  - List of Explosive Materials
  - Class 1
  - UN codes
- Is there an applicable exemption?
  - 555.141
- What class and/or type of explosive material?
  - Type of magazine
  - Tables of distances



regulations at 27 CFR part 555 should not be impacted by the addition of these explosive materials to the annual list because all explosive materials, including those not on the annual list (with the exception of certain materials noted in exemptions at 18 U.S.C. 845 and the implementing regulations at 27 CFR 555.141), already are regulated under this part. These materials are subject to the restrictions and regulations in this part regarding the requirements for manufacture, storage, distribution, use, and licensing or permitting. Any person who receives explosive materials is already required to be licensed as an importer, manufacturer, or dealer in explosive materials, or to hold a permit as an explosives user. For persons who already hold a license or permit under the explosives laws, no further action on their part would be required for them to acquire newly-added explosive materials.

#### Notice of the 2019 Annual List of Explosive Materials

Pursuant to 18 U.S.C. 841(d) and 27 CFR 555.23, I hereby designate the following as "explosive materials" covered under 18 U.S.C. 841(c):

#### A

Acetylides of heavy metals.  
Aluminum containing polymeric propellant.  
Aluminum ophorite explosive.  
Amatex.  
Amatol.  
Ammonal.  
Ammonium nitrate explosive mixtures (cap sensitive).  
\* Ammonium nitrate explosive mixtures (non-cap sensitive).  
Ammonium perchlorate having particle size less than 15 microns.  
Ammonium perchlorate explosive mixtures (excluding ammonium perchlorate composite propellant [APCP]).  
Ammonium picrate [picrate of ammonia, Explosive D].  
Ammonium salt lattice with isomorphously substituted inorganic salts.  
\* ANFO [ammonium nitrate-fuel oil].  
Aromatic nitro-compound explosive mixtures.  
Azide explosives.

#### B

Baranol.  
Baratol.  
BEAF [1, 2-bis (2, 2-difluoro-2-nitroacetoxyethane)].  
Black powder.  
Black powder based explosive mixtures.  
Black powder substitutes.

\* Blasting agents, nitro-carbo-nitrates, including non-cap sensitive slurry and water gel explosives.  
Blasting caps.  
Blasting gelatin.  
Blasting powder.  
BTNEC [bis (trinitroethyl) carbonate].  
BTNEN [bis (trinitroethyl) nitramine].  
BTTN [1,2,4 butanetriol trinitrate].  
Bulk salutes.  
Butyl tetryl.

#### C

Calcium nitrate explosive mixture.  
Cellulose hexanitate explosive mixture.  
Chlorate explosive mixtures.  
Composition A and variations.  
Composition B and variations.  
Composition C and variations.  
Copper acetylide.  
Cyanuric triazide.  
Cyclonite [RDX].  
Cyclotramethylenetetranitramine [HMX].  
Cyclotol.  
Cyclotrimethylenetrinitramine [RDX].

#### D

DATB [diaminotrinitrobenzene].  
DDNP [diazodinitrophenol].  
DEGDN [diethyleneglycol dinitrate].  
Detonating cord.  
Detonators.  
Dimethylol dimethyl methane dinitrate composition.  
Dinitroethyleneurea.  
Dinitroglycerine [glycerol dinitrate].  
Dinitrophenol.  
Dinitrophenolates.  
Dinitrophenyl hydrazine.  
Dinitroresorcinol.  
Dinitrotoluene-sodium nitrate explosive mixtures.  
DIPAM [dipicramide; diaminohexanitrobiphenyl].  
Dipicryl sulfide [hexanitrodiphenyl sulfide].  
Dipicryl sulfone.  
Dipicrylamine.  
Display fireworks.  
DNPA [2,2-dinitropropyl acrylate].  
DNPD [dinitropentano nitrile].  
Dynamite.

#### E

EDDN [ethylene diamine dinitrate].  
EDNA [ethylenedinitramine].  
Ednatol.  
EDNP [ethyl 4,4-dinitropentanoate].  
EGDN [ethylene glycol dinitrate].  
Erythritol tetranitrate explosives.  
Esters of nitro-substituted alcohols.  
Ethyl-tetryl.  
Explosive conitrates.  
Explosive gelatins.  
Explosive liquids.  
Explosive mixtures containing oxygen-releasing inorganic salts and hydrocarbons.

Explosive mixtures containing oxygen-releasing inorganic salts and nitro bodies.  
Explosive mixtures containing oxygen-releasing inorganic salts and water insoluble fuels.  
Explosive mixtures containing oxygen-releasing inorganic salts and water soluble fuels.  
Explosive mixtures containing sensitized nitromethane.  
Explosive mixtures containing tetranitromethane (nitroform).  
Explosive nitro compounds of aromatic hydrocarbons.  
Explosive organic nitrate mixtures.  
Explosive powders.

#### F

Flash powder.  
Fulminate of mercury.  
Fulminate of silver.  
Fulminating gold.  
Fulminating mercury.  
Fulminating platinum.  
Fulminating silver.

#### G

Gelatinized nitrocellulose.  
Gem-dinitro aliphatic explosive mixtures.  
Guanyl nitrosamino guanyl tetrazene.  
Guanyl nitrosamino guanylidene hydrazine.  
Guncotton.

#### H

Heavy metal azides.  
Hexanite.  
Hexanitrodiphenylamine.  
Hexanitrostilbene.  
Hexogen [RDX].  
Hexogene or octogene and a nitrated N-methylaniline.  
Hexolites.  
HMTD [hexamethylenetriperoxidodiamine].  
HMX [cyclo-1,3,5,7-tetramethylene 2,4,6,8-tetranitramine; Octogen].  
Hydrazinium nitrate/hydrazine/aluminum explosive system.  
Hydrazoic acid.

#### I

Igniter cord.  
Igniters.  
Initiating tube systems.

#### K

KDNBF [potassium dinitrobenzofuroxane].

#### L

Lead azide.  
Lead mannite.  
Lead mononitroresorcinolate.  
Lead picrate.  
Lead salts, explosive.  
Lead stypnate [stypnate of lead, lead trinitroresorcinolate].

# List of Explosive Materials

- Published Annually
- Not all-inclusive

# DOT Approvals Search

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## PHMSA

Pipeline and Hazardous Materials  
Safety Administration

ABOUT PHMSA SAFETY REGULATIONS AND COMPLIANCE RESOURCES

Home » Approvals and Permits » HazMat

### Hazardous Materials Approvals Search Page

Please use this search to find hazardous materials approvals.

<b>Approval Number</b>	<input type="text"/>	<b>Tracking Number</b>	<input type="text"/>
<b>Company Name</b>	<input type="text"/>	<b>Expiration Date</b>	<input type="text"/>
<b>Proper Shipping Name (PSN)</b>	<input type="text"/>	<b>Product</b>	<input type="text"/>
<b>UN Number</b>	<input type="text" value="0101"/>	<b>Packaging Note</b>	<input type="text"/>
<b>Hazard Class</b>	<input type="text"/>	<b>Approval Type</b>	<input type="text" value="- Any -"/>
<b>State</b>	<input type="text" value="- Any -"/>		

**Number of Results** Display  results per page

# DOT Approvals Search

Displaying 1 - 75 out of 75 results

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Approval Number	Tracking Number	Company	Expiration Date	Product	PSN	UN Number	Hazard Class	Packaging Note	Status
EX2008080128	2008080305	Huisky Trading Co., Ltd	31-May-15	Fuse (4-strand with overwrap)	Fuse, non-detonating [instantaneous or quickmatch]	UN0101	1.3G	Packaging Instruction 140 is assigned.	Expired
EX2010040247	2010040545	Beihai Kylin Fireworks Co., Ltd.	31-Jul-15	Quick Match (Fuse)	Fuse, non-detonating instantaneous or quickmatch	UN0101	1.3G	None	Expired
	2009111014	Crown Pyrotechnics, Inc.		Fuse w/delay	Fuse, non-detonating instantaneous or quickmatch	UN0101	1.3G		Deny
EX2010100075	2010100125	Kellners Fireworks Inc.		BF05	Fuse, non-detonating instantaneous or quickmatch	UN0101	1.3G	None	Approve
EX2011031177	2011031697	Kellners Fireworks Inc.		BF05B	Fuse, non-detonating instantaneous or quickmatch	UN0101	1.3G	None	Approve
EX2011031375	2011031966	Kellners Fireworks Inc.		BF01B	Fuse, non-detonating instantaneous or quickmatch	UN0101	1.3G	None	Approve

# ATF vs DOT Classification

- ATF classification is not always the same as DOT classification
  - Aerial shells over 10 inches
  - Black powder
  - Display shells containing flash powder
- DOT Class 1.4 explosives
  - Igniters
  - Pyrotechnic Fuse
  - Detonators



# ATF Classification

- ATF has 3 classes of explosives for storage purposes:
  - High explosives – detonate by means of a blasting cap when unconfined
  - Low explosives – deflagrate when confined
  - Blasting agents
- Definitions found in 555.11 and 555.202
- Fireworks: “Any composition or device designed to produce a visible or audible effect by combustion, deflagration, or detonation, and which meets the definition of “consumer fireworks” or “display fireworks” as defined by this section

# Display Fireworks Classification

- Designed to produce visible or audible effects by combustion, deflagration or detonation
- Classified by DOT as UN0333, UN0334 or UN0335
- Includes salutes containing more than 130 milligrams of flash powder
- Includes aerial shells containing more than 40 grams of pyrotechnic composition
- Includes other devices (e.g. cakes) that exceed the limits for consumer fireworks

# High Explosives

- Flash Powder
- Bulk Salutes – “Salute components prior to final assembly into aerial shells, and finished salute shells held separately prior to being packed with other types of display fireworks”



# Low Explosives - Igniters

- Regulated as low explosives unless:
  - Integrated into an exempt articles pyrotechnic during manufacture
- EIPB has determined several initiators that look and function similar to igniters are not explosive materials.



# Low Explosives – Pyrotechnic Fuse

- Regulated as a low explosive unless:
  - Designed for use in small arms ammunition;
  - Intended for sporting, recreational, or cultural purposes in antique firearms or antique devices; or
  - Integrated into consumer fireworks during the manufacturing process.



# Exemptions – Consumer Fireworks

- Must comply with CPSC standards for:
  - Construction
  - Chemical composition
  - Labeling
- Classified by DOT as UN0336 or UN0337
- Cannot contain more than 50 milligrams of flash powder for ground devices
- Cannot contain more than 130 milligrams of flash powder for aerial devices
- Explosives weight limits for other devices can be found in DOT regulations (APA 87-1)
- Manufacturing consumer fireworks

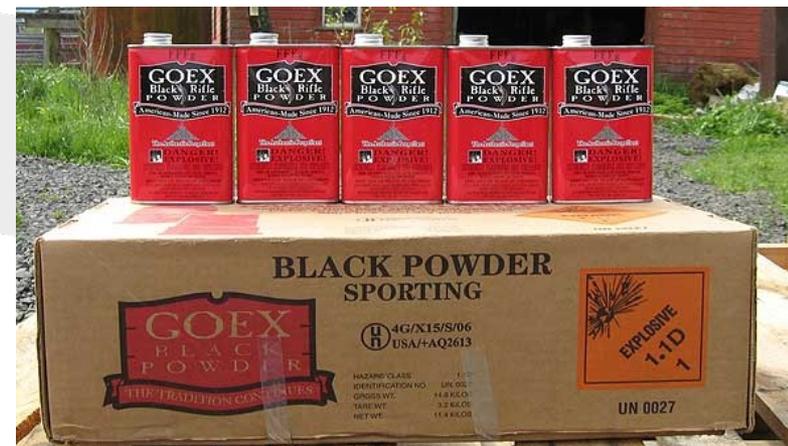
# Exemptions – Articles Pyrotechnic

- Pyrotechnic devices for professional use only – not intended for consumer use.
- Classified by DOT as UN0431 or UN0432
- Similar to consumer fireworks in:
  - Chemical composition; and
  - Construction
- Must meet the weight limits for consumer fireworks
- Cannot be labeled as consumer fireworks
- Domestic Manufacturing
- Manufactured with igniters?



# Exemptions – Black Powder

- Commercially manufactured
- Quantity cannot exceed 50 pounds
- Used solely for the following purposes:
  - Sporting;
  - Recreational; or
  - Cultural
- Only in antique firearms or antique devices



# Exemptions

- Transport under DOT or DHS
- Government agencies
- Indian agencies and tribes
- Small arms ammunition
- Model rocket motors

# Tables of Distances – Fireworks

1. Identify class or type of explosive materials
  - High, low, display fireworks, consumer fireworks
2. Identify the buildings or areas at the fireworks plant
  - Fireworks Process Building
  - Fireworks Mixing Building
  - Fireworks Non-Process Building
  - Fireworks Shipping Building
  - Fireworks Plant Warehouse
3. Identify the appropriate table(s) of distances
  - Storage: 555.218, 555.219, 555.224
  - Processing: 555.222, 555.223

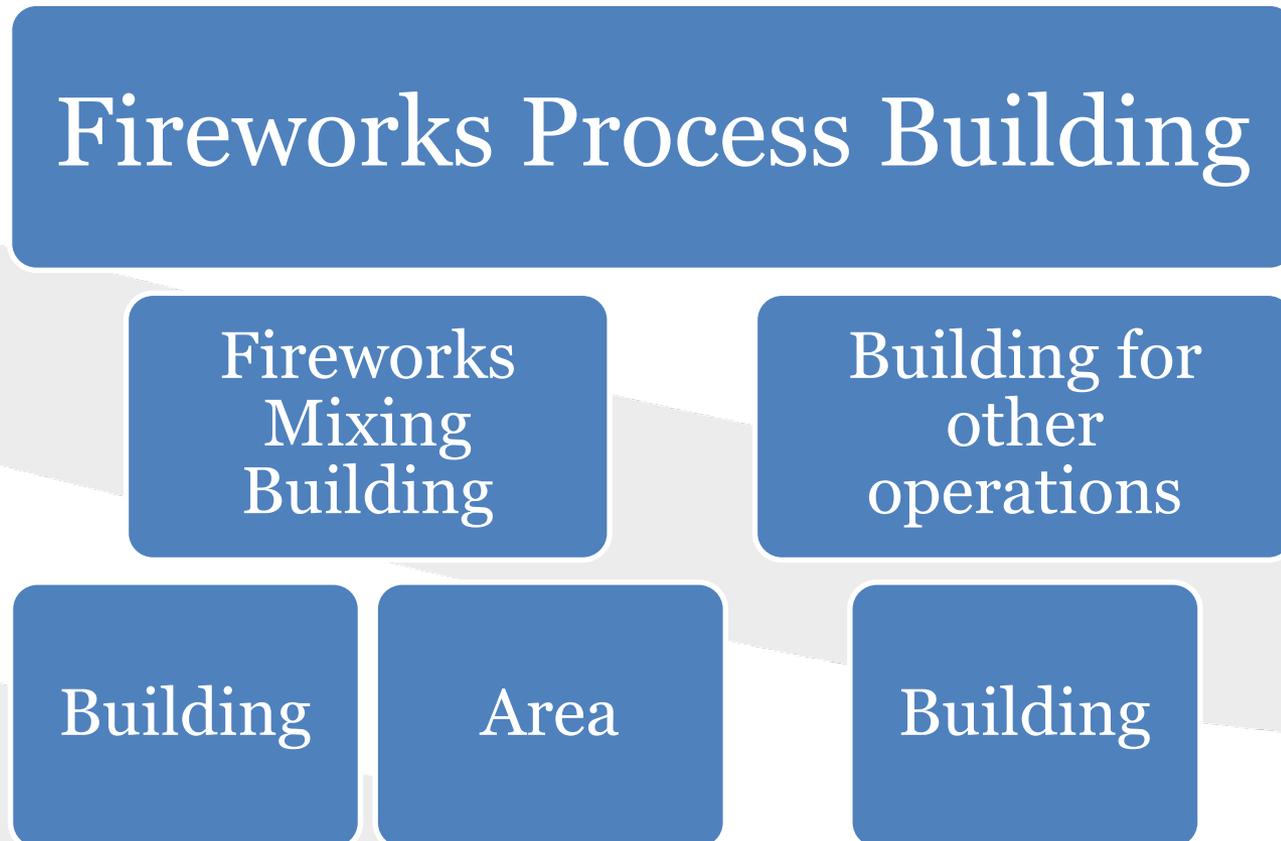
## Fireworks Process Building

- Any mixing building;
- Any building where explosive materials are pressed or otherwise prepared for finishing and assembly
- 555.222 & 555.223

## Fireworks Mixing Building

- Any building or area used for mixing or blending pyrotechnic compositions
- 555.222 & 555.223

# Fireworks Process Building



# Fireworks Non-Process Building

- Any office building or other building or area in a fireworks plant where no explosive materials are processed or stored.
- 555.222 & 555.223



## Fireworks Plant Warehouse

- Any building or structure used only for the storage of materials that do not contain explosive materials
- Not subject to any ATF tables of distances



# Fireworks Shipping Building

- Any building used for packing display fireworks into shipping cartons and for loading of packaged displays
- 555.223



## Fireworks Processing Limits– 555.221

1. Limits buildings and areas used for processing fireworks to 500 pounds of total net explosives weight
2. Fireworks process buildings are limited to 10 pounds of flash powder
3. All dry explosive powders and mixtures, partially-assembled display fireworks, and finished display fireworks must be removed from a fireworks process building at the end of the day's operations, and stored in a magazine.

## Processing Tables of Distances – 555.222

1. Fireworks process building to fireworks process building
2. Fireworks process building to fireworks non-process building

## Processing Tables of Distances – 555.223

1. Fireworks process building to other specified areas
  1. Passenger railways
  2. Inhabited buildings
  3. Highways
  4. Buildings used to store consumer fireworks or articles pyrotechnic
  5. Fireworks shipping buildings
  6. Magazines

# Display Fireworks Tables of Distances – 555.224

1. For the storage of up to 10,000 pounds of display fireworks
2. Bulk salutes, flash powder, and the storage of over 10,000 pounds of display fireworks must use 555.218
3. Footnote 3: Can use half the listed distance if the magazine was in its physical location prior to March 7, 1990, and is properly barricaded.

## Tables of Distances – 555.218

1. Use for the storage of bulk salutes, flash powder, over 10,000 pounds of display fireworks, and other high explosives.
2. If display fireworks storage falls below 10,000 then 555.224 must be used.

## Tables of Distances – 555.219

1. Used for the storage of other low explosives that are not display fireworks
  - Igniters
  - Pyrotechnic fuse
  - Black powder
  - Stars
  - Lances

## Tables of Distances – Combining Magazines

1. The table of distances at 555.218 specifically requires magazines that fail the specified magazine separation distances to be considered as one magazine when determining the necessary distances to inhabited buildings, highways or passenger railways.
2. ATF is proposing to add similar language for the tables of distances at 555.219 and 555.224.

# Variations – Excess Inventory

- In the event an industry member finds themselves in a situation where they have excess inventory due to Covid-19 related cancellations, please:
  - Contact your local ATF office
  - Ensure you can meet the table(s) of distances
  - Determine if a variance is needed (e.g. locks on rented trailers)
  - Contact EIPB
- Consider off-site storage
- Consider shared storage with another licensee or permittee
- Transfer to another licensee or permittee
  - Permittee surplus stock transfers

# EIPB

- Unsure if your device/article/composition is regulated?
  - Contact EIPB at 202-648-7120 or [eipb@atf.gov](mailto:eipb@atf.gov)