

## INFORMATION

Sizes	Abrev	Description
Inside Diameter	ID	The inside measurement of a tube or mortar. The ID, aka caliber or bore, corresponds to the OD of the aerial fireworks shell or device.
Outside Diameter	OD	The outside measurement of a tube or mortar as well as the OD of the aerial fireworks shell or device.

In the past, some aerial shells were measured by their circumference. The correct standard is to measure by the ID or caliber of the mortar that is used to fire them from. What used to be a 12" measured by circumference is actually a 4" by mortar ID! There are three standard measurements of mortar or tube ID for display fireworks. The table below shows the inches used in the US, the *nominal* conversion in millimeters, and the # measurement for some of the smaller, aerial devices (ie. #2 comet racks).

### MORTAR - AERIAL SHELL CONVERSION CHART

Inches	Millimeters	#	Inches	Millimeters	#
0.75"	20mm		2.50"	64mm	#200
1.00"	25mm	#1	3.00"	76mm	#300
1.20"	30mm		4.00"	102mm	
1.25"	32mm	#2	5.00"	127mm	
1.50"	38mm		6.00"	155mm	
1.58"	40mm		8.00"	205mm	
1.75"	45mm	#3	10.0"	255mm	
2.00"	50mm	#100	12.00"	305mm	
2.40"	60mm		16.00"	407mm	

### SHIPPING DEFINITIONS

The United Nations shipping system has been adopted for all shipments to, in and from the United States. For more information, please refer to: Title 49, *Code of Federal Regulations*, Chapter 1, U.S. Department of Transportation, Parts 171-177, Hazardous Materials Regulations. *Please note: The DOT Classification 1.3G or 1.4G is only a transportation designation. It does not provide an accurate indication of the performance of the fireworks device!*

Shipping Definition	Abrev	Description
UN 0335 Fireworks (was Class B)	1.3G	Any quantity requires CDL and placarding. ie.: aerial shells, comets, mines etc.
UN 0336 Fireworks (was Class C)	1.4G	1,000+ lbs requires CDL and placarding. Example: Inserts, comet racks, quick match, etc. This class now includes most Consumer Fireworks.
Display Fireworks (was Class B, Special Fireworks)	1.3G	The ATF term for fireworks not available for sale and use by the general public. Includes most large aerial shells, mines, comets, Roman candles, cakes, etc.
Consumer Fireworks (was Class C, Common Fireworks)		Consumer Product Safety Commission (CPSC) term for fireworks available for sale to the general public. ie.: Firecrackers, sparklers, etc.
Commercial Drivers License	CDL	Required license for all drivers of commercial vehicles.
Container load	CL	Full container of a single shipment.
Explosive Number	EX #	The number assigned by the DOT to each manufacturer for each explosive device they make and ship.
Hazardous Material	HM	Any materials classified under 49 CFR as hazardous in minimum quantities.
Less than container load	LCL	Less than a full container of many shipments
Less than truckload	LTL	Less than a full truck of many shipments
Low Explosives	LE	The ATF classification for non-detonating explosives includes most display fireworks, black powder, etc.
Truckload	TL	Full truck of a single shipment
UN0066 Ignitor Cord 1.4G		DOT classification for some types of fuses and match
UN 0101 Fuse, Nondetonating 1.3G		A DOT classification for some types of fuses and match
UN 0105 Fuse, Safety 1.4G		A DOT classification for some types of fuses and match
UN 0335 Fireworks 1.3G		The DOT classification for most Display fireworks
UN 0336 Fireworks 1.4G		The DOT classification for some Display fireworks, most inserts, and consumer fireworks
UN 0431 Articles, Pyrotechnic 1.4G		A DOT classification for Pyrotechnic Articles for Professional Use ONLY. Examples: Electric Match, Inserts, some Display Fireworks

**Product Demos are ???????, 2007!**

## MATCH AND FUSE

	Description
Bare Match	The same as Black Match. A short section is bare on quick match and is the ignition fuse for many fireworks.
Quick match	String impregnated with gunpowder. It is what is inside quick match. It burns at about 100 ft. per second
Black Match	Quick match with connections or buckets at preset intervals for installing leaders from aerial shells.
Chains	Bare match inside an aerial shell or device that connects the passfire to the time fuse.
Cross match	Special coated wires used to ignite fireworks. Used to be called "squibs" but squibs are actually used in blasting.
Electric Match	A short piece of quick match with a paper cap on aerial shells, setpieces, racks, etc.
Leader match	Bare match that connects the leader to the cross match inside, then to the lift charge of an aerial shell or device.
Passfire	Black match in a paper piping. It comes in bundles and is also called bundle match. Quick match is used for making leaders and chains.
Quick match, Ignitor Cord	A thin green or red fuse also called visco. It is used as leader fuse for some smaller fireworks and internal effects in some larger devices.
Cannon fuse	A thicker cord like multicolor fuse. It is used primarily as delay fuse between the break charge and the leader in aerial shells.
Time fuse	

## STYLES & EFFECTS

Type or style	Abrev	Description
# Timed reports	# TRpt	A special multiple break shell with timed reports
# Break	# Brk	The number of breaks in an aerial shell.
Artillery	Art	An aerial shell made up of reports, often timed
Break	Brk	The burst of on an aerial shell.
Canister	Can	A shape of the aerial shell. Most Italian-American style effects shells are canister. As opposed to round.
Chrysanthemum	Chrys	A round, fine petal, flower shape aerial star shell with tailed on the stars
Color Changing	Chg	The stars change from one color to another
Comet	Cmt	A single, large star that functions from the mortar up
Crackling	Crk	Stars that crackle as they function.
Crossette	Cross	Stars that split across each other aka as split comets.
Dahlia		Brightly colored stars that fall from the break
Diadem	Diad	A large chrysanthemum with a huge willow effect
Falling flowers	FFlow	Small color flowers that fall from a flower type shell
Gamboge	Gamb	Fine gold to orange-tailed chrysanthemum star effect
Half & Half	H&H	A flower with half one color and half another
Heavy report	HRpt	The final very loud report in a multiple break
Kamuro	Kam	A very large chrysanthemum with fine, elegant tails
Mine		Stars and effects that function from the mortar up
Palm Tree	Palm	A round effect that looks like a palm tree in the sky
Parachute	Para	Small parachutes that usually have magnesium stars.
Pattern	Ptnn	Stars that break into a shape such as a star, heart, etc.
Peony	Pny	A round, larger petal, flower shape aerial star shell
Pistil	Pist	The center of a flower style shell. Just like in nature
Report(s)	Rpt(s)	Small salute(s) that are one effect of many in a shell
Ring		A type of pattern.
Rising	Ris	Effects that rise from the mortar with an aerial shell
Round	Rd	A shape of the actual aerial shell. Most flower styles are round. As opposed to canister
Salute	Sal	A single break, loud flash report. Often with titanium
Saturn	Sat	A star shell with a ring around it
Serpents	Serp	Effects that serpentine, aka fish or snakes
Shell of Shells	SOS	A number of smaller shells within a larger shell
Shooters	Shoot	Bright magnesium stars that shoot across the sky
Siateens	Siat	Small, loud reports specifically timed and patterned
Star		Small pellets that are the basis for all fireworks colors
Strobe	Strb	A very bright, flashing, magnesium star
Tail or Trunk	Tl or Tk	A rising color on an aerial shell. Trunks are wider
Tourbillion	Tourb	Effects that whiz in small circles, aka whirlwinds
Transformation	Trans	Effects that change in intensity, duration, and/or color
Whistles	Whis	Effects that make high to low pitched sounds
Willow	Will	Like a big willow tree

**Questions?**  
**Please call for more information!**  
**We're here to help make your show a success!**