

SPECIFICATIONS

Revised January 28, 2013

MIGHTY-MITE MORTARS (2" - 4" IDs)

- Mighty-Mite Mortars** are *one piece*, 100% High Density Polyethylene (HDPE) plastic fireworks mortars. They are blowmolded with our custom dies using a High Molecular Weight (HMW) HDPE resin.
- The bottom, which is thicker than the walls, is flat and the edges are slightly rounded. What *appears* to be a seam on the outside is simply the marks left on the plastic by the outside die mandible; there is **NO SEAM**. *It is one piece of plastic!*

PYRO-PIPE MORTARS (5" - 8" IDs)

- Pyro-Pipe Mortars** are *two piece* fireworks mortars made of extruded seamless HDPE Medium Molecular Weight (MMW) PE 3408 pipe and a **Pyro-Plug**.
- Each is cut with a special band saw so it is square and then deburred so the ends are straight and smooth.
- One **Pyro-Plug** (custom wood plug in a 1:1 ratio ID to length) is fastened into one end with standard bolts/threaded rod that run through holes drilled all the way through both the pipe and plug.
- The 5" & 6" have 2 - 3/8" bolts and the 8" have 2 - 1/2" bolts. All are evenly spaced and held in with large washers ensuring even grip on the walls and distribution of lift gas pressures.

PYRO-PIPE MAGNUM MORTARS (5" - 8" IDs)

- Pyro-Pipe Magnum Mortars** are longer, double plugged versions of **Pyro-Pipe Mortars**. *Custom made to your specifications (6-8 weeks). Costs are on a per quote basis.*

PYRO-POTS (3" - 8" IDs)

- Pyro-Pots** are the shorter versions of either **Mighty-Mite** or **Pyro-Pipe Mortars**, to be used as SPFX pots. *Custom made to your specifications (6-8 weeks). Costs are on a per quote basis.*

GENERAL

- The resins are strongly pigmented with carbon black to reduce any nominal effects (continuous & over years) due to exposure to sunlight (UHV light).
- Each is straight and true; no coiled pipe is used.
- The walls are smooth; no significant burrs or bubbles.
- The mortar ID is round with ovality not exceeding 3%.
- Each is branded or stamped with either **Mighty-Mite Mortar** or the ID size and production code.
- As with all HDPE pipes or tubes, the open ends tend to curl in slightly. This is often called "necking in" and is normal.

ASTM SPECS	Mighty-Mite	Pyro-Pipe	TEST
Tensile Yield	> 3,900 psi	> 3,300 psi	D638
Vicat Softening Point	255° F	257° F	D1525
Brittleness Temperature	-105° F	-180° F	D746

These specifications are a *general* guide. As with any product, there may be some variations in individual units and between different production runs and even within production runs.

No warranties are expressed or implied regarding these materials and specifications. Mighty-Mite Marketing, Inc. reserves the right to modify materials and specifications at anytime for any reason.

MIGHTY-MITE MORTARS (2" - 4" IDs) PYRO-PIPE MORTARS (5" - 8" IDs)

Size	ID MIN ¹	ID MAX	ID +	OD Top	OD Bottom	OD +
2" 50mm	2.00	2.13	0.13	2.27	2.43	0.15
2½" 60mm	2.50	2.63	0.13	2.77	2.93	0.15
3" 76mm	3.00	3.17	0.17	3.27	3.43	0.15
4" 102mm	4.00	4.17	0.17	4.45	4.60	0.15
5" 127mm	5.00	5.10	0.10	5.41	5.56	0.15
6" 155mm	6.00	6.12	0.12	6.47	6.63	0.15
8" 205mm	8.00	8.16	0.16	8.47	8.63	0.15

Size	ID Height	OD Height	+/-	SDR ²	Unit Weight ³	+/-
2" 50mm	13.75	14.00	0.13	11.76	0.95	0.06
2½" 60mm	15.75	16.00	0.13	14.71	1.00	0.08
3" 76mm	18.37	18.63	0.13	17.65	1.40	0.10
4" 102mm	24.14	24.50	0.19	16.67	2.75	0.15
5" 127mm	25.00	30.00	0.50	21.00	7.00	1.00
6" 155mm	30.00	36.00	0.50	21.00	12.00	2.00
8" 205mm	40.00	48.00	0.50	26.00	22.00	3.00

Size	Top Wall ⁴	Bottom Wall ⁵	+/-	Bottom End ⁶	Plug Length ⁷	+/-
2" 50mm	0.17	0.18	0.01	0.20		0.01
2½" 60mm	0.17	0.18	0.01	0.20		0.01
3" 76mm	0.17	0.18	0.01	0.20		0.01
4" 102mm	0.25	0.25	0.01	0.27		0.01
5" 127mm	0.26	0.26	0.01		5.00	0.25
6" 155mm	0.32	0.32	0.01		6.00	0.25
8" 205mm	0.39	0.39	0.02		8.00	0.25

All measurements are inches or pounds, unless otherwise noted.

Please note the +/- ranges! These are the AVERAGES.

- The ID Minimum is **NO LESS THAN** the nominal ID.
- (SDR) Standard Dimensional Ratio (ID/Wall thickness)
- Unit Weights may vary slightly, especially for Pyro-Pipes.
- Mighty-Mite Mortars** walls taper from bottom to top.
- Bottom Wall thickness at 1" above the bottom.
- Mighty-Mite Mortars** have flat bottoms with rounded edges and are one piece, blowmolded HDPE tubes. This is *not* a plug!
- Pyro-Pipe Mortars** (5"-8") are seamless, extruded HDPE with **Pyro-Plugs** (solid wood in a 1:1 ratio to the ID) bolted in the bottom. The wood plug and bolts accounts for the greater weight and +/- variations for the *length* of the plug.

MORTARS OF ALL TYPES SHOULD BE CAREFULLY INSPECTED ***BEFORE EACH USE!*** MORTARS IN RACKS MUST BE STAKED AND/OR BRACED ***TO PREVENT TIPOVERS!*** SHOOTERS & CREW MUST WEAR PROTECTIVE SAFETY EQUIPMENT AND HAVE A BARRICADE BETWEEN THEMSELVES AND THE MORTARS!

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