

# Purchasing and Preparing Pipe Insulation

Invented at Boston Children’s Museum decades ago, and replicated by museums and schools across the country, the “Raceways & Rollercoasters” activities continue to be some of the most popular ever created by the Museum. Whether you call them “Balls and Tracks”, “Marble Runways” or “Raceways”, one thing remains consistent—they are a whole lot of fun.

The pipe insulation for these activities can be found in hardware stores and insulation supply stores. See page 2 of this document for information on preparing this insulation for use.

The dimensions of this pipe insulation are important—if it is too thin, kids will not be able to make successful loops (the insulation will simply fold, rather than bend). If it is too thick, it will be too difficult to manipulate. Use the following descriptions and dimensions when shopping:

- **Foam pipe insulation**
- **3/4”, 7/8”, or 1” Inner Diameter (ID)**
- **1/2” wall thickness (this wall thickness is important)**

You can find this insulation locally at most hardware stores and insulation supply stores (there is likely one of these specialty stores somewhere in your area...it’s where plumbers often purchase this insulation). Alternatively, you can also order these materials online and have them delivered to you. Keep in mind that websites and part numbers frequently change—check the item numbers suggested below against the dimensions of the item you are ordering and make sure it is correct.

- **McMaster Carr ([www.mcmaster.com](http://www.mcmaster.com))** - 6-foot lengths of pipe insulation (Part # 4530K145 preferred (7/8” ID); Part # 4530K144 (3/4” ID) also acceptable). This is polyethylene foam, round, semi-slit, closed cell pipe insulation with no backing. Sounds confusing, but these are simply terms used in the industry. Use the part number to search on the website, and call in your order or set up an account...we think McMaster-Carr is a pretty great place to order materials from. It’s like a giant hardware store with every item you can think of, and lots you haven’t.
- You can also purchase foam pipe insulation through True Value and Ace Hardware, but make sure you call them and stress that you need the 1/2” wall thickness and other dimensions suggested above.

You will also need marbles for this activity. Toy stores sometimes carry them, but ordering them online might be easiest:

- **Marbles, 1/2”–5/8” glass (50–100)** - There are several online marble shops. We have used [www.moonmarble.com](http://www.moonmarble.com) (item SKU# 2BPWA), but there are many online shops—search for “glass marbles”. If you are more accustomed to shopping locally, some art supply stores, aquarium stores and game stores carry glass marbles.

# Preparing Pipe Insulation

- 1) Using a serrated knife (like a steak knife) or utility knife, cut along the length of the pipe insulation so that you have two U-shaped halves. You should cut directly across from the existing split along the tube, and check every once in a while as you are cutting to make sure that both sides are even.



- 2) Some pipe insulation comes with a plastic-covered sticky side—if your pipe insulation doesn't have this, then you are done! If it does have the sticky side, pull off the plastic strip that is covering the sticky stuff and move on to step 3.



- 3) Place masking tape all along the edge with the sticky stuff—press the tape down firmly so you know it's stuck. Then pull the tape off to remove the sticky stuff. Now your pipe insulation is ready!

