Pipe is one of the most ubiquitous products in construction. It is made of a wide variety of materials, including galvanized steel, black steel, copper, cast iron, concrete, and various plastics such as AB, PVC, CPVC, polyethylene, and polybutylene, among others.

But like wood 2-by-4’s, which are not really 2 inches by 4 inches, pipe is identified by “nominal” or “trade” names that are related only loosely to actual dimensions. For instance, a 2-inch galvanized steel pipe has an inside diameter of about 2-1/8 inches and an outside diameter of about 2-5/8 inches. It is called “2-inch pipe” only for the sake of convenience.

Since few, in any, pipe products have actual dimensions that are in even, round inch-pound numbers, there is no need to convert them to even, round metric numbers. Instead, only their names change – from inch-pound to metric. Pipe cross sectional sizes do not change. Fittings, flanges, couplings, valves, and other piping components are renamed in like manner, as are pipe threads.

Here are the inch pound names for pipe products (called NPS or “nominal pipe size”) and their metric equivalents (called DN or “diameter nominal”). The metric designations conform to International Standards Organization (ISO) usage and apply to all plumbing, natural gas, heating oil, and miscellaneous piping used in buildings. Reinforced concrete pipe and corrugated steel pipe used in highways and other civil works construction also use these designations.
Note that all whole-number inch designations on the following chart convert to multiples of 25 mm except for 3-inch pipe, which ISO designates as 80 mm.

Metric Rules-Of-Thumb

1 mm = about 1/25 inch = thickness of a dime

25 mm = about 1 inch (1″ = 25.4 mm)

300 mm = about 1 foot (12″ = 304.8 mm)

1 m² = roughly 10 sq. ft. (1 m² = 10.76 sq. ft.)

1 L = about 1 quart (1 L = 1.06 qt.)

1 kg = about 2.2 pounds

1000 kg = 1 Mg = 1 metric ton = about 2200 lbs.