FUEL INJECTION TUBING — SAE J529a

SAE Standard

Report of Engine Committee and Tube, Pipe, Hose, and Lubrication Fittings Committee approved January 1955 and last revised by the latter May 1967.

Scope—This standard covers cold drawn annealed seamless low carbon steel tubing intended for use in fuel injection lines or in other applications requiring tubing of a quality suitable for cold swaging, cold upsetting, and cold bending.

Manufacture—The tubing shall be cold drawn from steel billets which, after piercing, have had the internal surface conditioned to remove all hot mill fissures or other defects. After forming, the tubing shall be annealed in such a manner as to prevent formation of scale on the inside surface and produce a finished product which will meet all requirements of this standard.

Dimensions and Tolerances—The standard nominal diameters and the applicable dimensions and tolerances are shown in Table 1.

Quality—The outside and inside surfaces of finished tubing shall be free from scale, rust, seams, laps, laminations, deep pits, or other injurious defects. The inside surface of the tubing shall be finished to ensure a smooth bore of accurate size with no fissures, crevices, or other imperfections deeper than 0.005 in. or 5% of the wall thickness, whichever is less.

TABLE 1 — TUBING DIMENSIONS AND TOLERANCES, IN.

Nominal Tubing OD	Outside Diameter[a]			Inside Diameter	
		Tolerance			
	Basic	Plus	Minus	Basic	Tolerance ±
1/4	0.250	0.005	0.000	0.063	0.0025
1/4	0.250	0.005	0.000	0.093	0.0025
1/4	0.250	0.005	0.000	0.125	0.0025
5/16	0.312	0.005	0.000	0.093	0.0025
5/16	0.312	0.005	0.000	0.125	0.0025
5/16	0.312	0.005	0.000	0.146	0.0025
3/8	0.375	0.005	0.000	0.125	0.0025
3/8	0.375	0.005	0.000	0.135	0.0025
3/8	0.375	0.005	0.000	0.155	0.0025

[a] The actual outside diameter shall be the average of the maximum and minimum outside diameters as determined at any one cross section through the tubing.