

Impact category results for industrial pipes

Environmental performance

Piping function	Piping option	Global warming potential	Acidification potential	Eutrophication potential	Ozone depletion potential	Smog formation potential	Non-renewable primary energy demand
		[kg CO ₂ -eq / [2.28 gpm]]	[kg SO ₂ -eq / [2.28 gpm]]	[kg PO ₃ ⁴ -eq / [2.28 gpm]]	[kg R11-eq / [2.28 gpm]]	[kg C ₂ H ₄ -eq / [2.28 gpm]]	[MJ LHV / [2.28 gpm]]
Industrial water	aquatherm blue pipe	20.9	3.96E-02	9.09E-03	3.65E-10	5.58E-03	467
	Steel pipe	33.2	1.80E-01	2.36E-02	1.74E-06	1.44E-02	511
	PVC pipe	27.8	3.66E-02	1.17E-02	1.62E-09	7.92E-03	471

Piping type:

- aquatherm polypropylene random copolymer (PP-R) blue piping system
- Steel pipe (ASTM A53) used for mechanical functions (HVAC, chilled water and condensing water)
- Polyvinyl chloride (PVC) pipe used for water distribution and HVAC functions

Functional unit:

Accommodating a volumetric flow of 8,63 litres per minute over a distance of 100 feet for the duration of 60 years.

Source:

Cradle-to-Gate Study of Competing Pipe Systems

