



T-flex for Underground Fire Main Systems

When choosing a piping system for a sophisticated application as fire main, reliability of product performance holds great value. T-flex pipe systems are used for underground fire mains in industrial and municipal fire systems in gas fields, refineries, chemical plants and manufacturing plants. T-flex pipe systems offered by Dadex are manufactured from polyethylene (PE) compound. The unique features of PE make T-flex pipe system a reliable choice when it comes to protection against fire.

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WHY T-FLEX PIPE SYSTEMS?

- **Resistant To Corrosion**

T-flex pipes do not corrode over time. Its premium polyethylene grade resists corrosion, adding durability and useful life years to the piping system.

- **Impervious To Contaminated Sub-soils**

T-flex pipes do not rust or rot as a result of under ground leeching. They remain unaffected when buried under soils that are acidic, alkaline, corrosive or saline in nature.

- **Non Biodegradable**

They are non biodegradable. They retain their physical properties, inert characteristics, dimensional properties and resist deformation.

- **Cost Effective & Maintenance Free**

T-flex pipe does not require external wrapping and cathodic protection, generally needed for metal pipes to prevent corrosion, making it a cost effective and maintenance free solution.

- **Resistant To Saline Water**

Due to its inert characteristics, T-flex can be used to transport salty/sea /saline water.

- **Extendable Connections**

T-flex pipes like other piping systems have the provision of flanged connections. It can be connected to metallic manifold above ground.

PRODUCT RANGE

T-flex Pipe Dimensions:

T-flex pipes are manufactured in nominal outside diameter of size 20, 25, 32, 40, 50, 63, 75, 90, 110, 125, 160, 180, 200 and 250mm.

Standard Lengths:

Coils up to 50m and 100m lengths are available for sizes up to 90mm. Pipes are available in straight lengths of 6m and 12m for sizes up to 250mm.

TECHNICAL SPECIFICATIONS

Pressure Rating Of T-flex Pipes:

Operating pressure of T-flex pipes range between 6, 8, 10, 12.5 and 16 bar. The nominal pressure (PN) corresponds to the maximum allowable working pressure in bar for pipe at 20°C.

Operating Pressure Of T-flex Fittings:

10 bar (Compression Type)

16 bar (Compression Type) are also available against commercially feasible quantities.

8 – 16 bars (Butt Fusion Type)

Cold Bending Radii (CBR):

CBR in metres at 20°C = 22 x Outside Diameter of pipe.

Standards:

T-flex systems are manufactured as per latest International Standards.

TABLE 1: TYPICAL PHYSICAL PROPERTIES OF POLYETHYLENE (BLACK)

Properties		Typical Value*	Unit	Test Method
Density	(Compound)	950-959	Kg/m ³	ISO 1183
Melt Flow Rate	(190°C/5.0 kg)	0.3	g/10 min	ISO 1133
Tensile Stress at Yield	50 mm/min	19-21	MPa	ISO 1133
Elongation at Yield		9	%	ISO 527-2
Elongation at Break		>350	%	ISO 527-2
Charpy Impact Strength, notched	0°C	14	kJ/m ²	ISO 179/1eA
Carbon Black Content		≥2	%	ASTM D 1603
Brittleness Temperature		<-70	°C	ASTM D 746
ESCR	10% Igepal, F ₆₀	>10000	h	ASTM D 1693-A
Thermal Stability	210°C	>15	Min	EN 728

* The above given data is valid for PE 80. Pipes and fittings of PE 100 can also be supplied against specific requirements.

TYPICAL INDUSTRIES SERVED • Breweries • Chemicals • Compressed Air • Food Processing • Gas (Natural & Processed) • Marine • Paint • Power Generation • Refineries • Textile (Dyeing / Bleaching/ Effluents)

*Data should not be used for specification work. Dadex Technical section should be consulted for specific operational conditions with respect to pressure, temperature and fluid concentration prior to specifying the product.

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Note: All information contained in this literature is given in good faith. The user should, however, check that the product is suitable in the application for which it shall be used. Please ensure compliance with all health and safety requirements. Whilst continuing its programme of continuous development, Dadex reserves the right to modify or extend any published information without any prior notification. No responsibility can be accepted for any error, omissions or incorrect assumptions.

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