fcsholdings.co.za

ADMIN@FCSHOLDINGS.CO.ZA

UPINGTON : 054 325 0994

De Drift Plaza, Louisvale Avenue, Olyvenhoudtsdrift, Utn, 8801

BLOEMFONTEIN : 051 492 1716

18 Mill Street, Hamilton, Bfn, 9301

GAUTENG : 010 824 7064

Unit 6, Pomona Junction,

C/O Bon Cretion Street & Constantia Road, Kempton Park, 1619

# *Low-Density Polyethylene Pipe*

LDPE (Low-Density Polyethylene) pipe is a flexible, lightweight, and cost-effective piping solution designed for pressure-less transport of liquid, gaseous and bulk media in the chemical and food industry, agriculture and for laboratory purposes and not intended for the transportation of oil and gasoline materials. Ideal working temperature is +5°C - +40°C. At higher temperatures, the tubes soften, and the fault pressure decreases and at lower temperatures, the material solidifies and becomes brittle. The limit suggested temperatures are -5 ° C / + 50 ° C. It's characterized by its ability to handle pressures up to 6 bars (depending on the class) and is resistant to corrosion, chemicals, and to some extent UV exposure.

.

## Key Technical Specifications:

- **Material:** Low-Density Polyethylene (LDPE).
- **Density:** 917–930 kg/$m^3$.
- **Working Pressure:** Typically, available in Class 3 (3 bar) and Class 6 (6 bar).
- **Temperature Range:** Can withstand continuous temperatures of +5°C - +40°C
- **Chemical Resistance:** Resistant to many common chemicals, fertilizers, and corrosion.
- **UV Resistance:** UV protection is incorporated for outdoor use.
- **Flexibility:** Highly flexible and can be easily bent and curved.
- **Sizes:** Available in various diameters, often from 20mm to 80mm, and lengths can be customized.
- **Standards:** While SABS 533 Part 1 was previously used, it has been withdrawn and replaced with ISO 4427, which is based on OD (outside diameter) measurements. Some manufacturers still refer to ISO 8779.
- **Installation:** Can be installed above or below ground, using simple equipment.

## Applications:

- **Irrigation:** Drip irrigation, micro-sprinklers, and mainline supply.
- **Water Supply:** Low-pressure water lines and connections.
- **Drainage:** Used in some drainage systems.
- **Agricultural:** Used in various agricultural applications, including tree and vine irrigation.

## Advantages:

- **Cost-effective:** Generally, more affordable than other pipe materials.
- **Easy to install:** Flexible and lightweight, making installation straightforward.
- **Durable:** Resistant to damage from chemicals, some sort of UV exposure, and impacts.
- **Long-lasting:** Can have a long service life in various applications.

## Important Considerations:

- **Pressure Rating:** Ensure the chosen pipe class meets the required pressure for the application.
- **Fittings:** Use appropriate fittings, such as full flow or barbed fittings, for secure connections.
- **SABS 533:** Be aware that SABS 533 Part 1 has been withdrawn and replaced by ISO 4427.
- **Measurement:** LDPE pipe is measured internally as opposed to HDPE which is normally measured by outside diameter.

| Dia mm | Class | Internal Dia mm | External Dai mm | Wall Thickness | Mass Kg/m |
|---|---|---|---|---|---|
| 15 | 3 | 15,84 | 18,34 | 2,5 | 0,062 |
| 15 | 6 | 15,85 | 19,15 | 3,3 | 0,083 |
| 20 | 3 | 20,7 | 24,04 | 3,34 | 0,109 |
| 20 | 6 | 20,7 | 25 | 4,3 | 0,146 |
| 25 | 3 | 26,74 | 30 | 3,26 | 0,138 |
| 25 | 6 | 26,74 | 32,55 | 5.81 | 0,249 |
| 23 | 3 | 34,3 | 37,84 | 3,54 | 0,185 |
| 23 | 6 | 34,3 | 41,5 | 7,2 | 0,395 |
| 40 | 3 | 40 | 44,6 | 4,6 | 0,258 |
| 40 | 6 | 40,3 | 49,1 | 8,8 | 0,564 |
| 50 | 3 | 51,84 | 57,14 | 5,3 | 0,433 |
| 50 | 6 | 51,66 | 62,75 | 11,09 | 0,919 |
| 65 | 3 | 62,34 | 68,85 | 6,51 | 0,617 |
| 65 | 6 | 62,35 | 75,74 | 13,39 | 1,355 |
| 80 | 3 | 77,74 | 85,75 | 8,01 | 0,947 |
| 80 | 6 | 77.75 | 94,54 | 16,79 | 2,12 |


fcsholdings.co.za