

OPTIFLUX™

High Strength Oriented PVC (PVC-O) Pipes
Meets International Standard ISO 16422:2014

Description



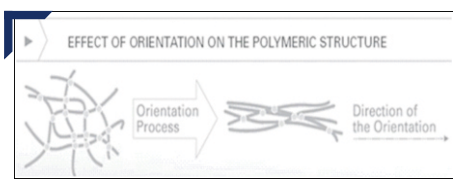
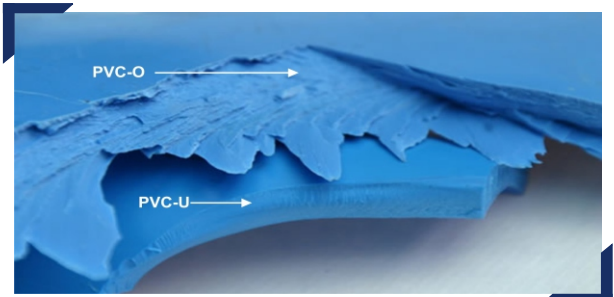
Optiflux High Strength Oriented PVC Pipes are the strongest, toughest & most flexible pipes for the conveyance of high-pressure water, best suited for underground applications. With a number of exceptional features, Optiflux PVC-O Pipes are made in accordance with International Standard ISO 16422:2014. These pipes are available in pressure class PN 10, PN 12.5, PN 16 & PN 25 in sizes ranging from 90 mm to 630 mm. These pipes have an effective length of 6 meters.

Applications

PVC-O Pipes have been developed specifically for drinking water pressure distribution applications. These pipes can also be used for other non-potable underground applications like waste water, reclaimed water, irrigation, sewerage, fire protection nets, infrastructure nets and other industrial applications.

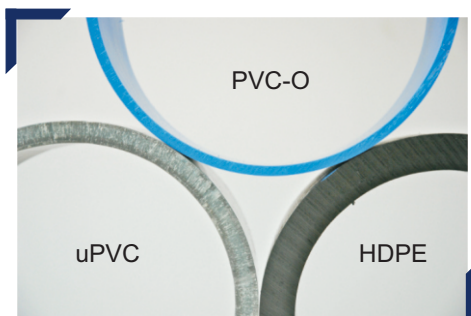
Technology

OPTIFLUX PVC-O pipes use a revolutionary molecular orientation technology which orients the PVC molecules both in the axial and circumferential directions (bi-axial orientation). The orientation process is carried out by stretching the initial extruded uPVC tube under precise and controlled conditions of pressure and temperature. This process orients and preferably aligns & lengthens the polymer molecules; which significantly increases strength of the material.



Biaxially Oriented PVC Pipes were discovered many years ago, and the most common application is potable water distribution under pressure. Molecular orientation results in an exceptionally tough, high performance thermoplastic pipe with greatly enhanced physical and mechanical characteristics, increased hydraulic capacity, greater impact resistance, higher strength, elasticity & ductility, improved

fatigue resistance, better creep behaviour and reduced weight as compared to other pipes. The ultimate tensile strength and impact resistance of PVC-O pipe is up to four times that of conventional uPVC pipe and equivalent to that of Ductile Iron pipe. OPTIFLUX PVC-O is the high-performance, cost-effective pipe material choice for pressure water applications.



Advantages

- **High-Tech Manufacturing Mechanism**
PVC-O Pipes are manufactured by a revolutionary new molecular orientation process which orients the PVC molecules and imparts strength.
- **Easy Jointing Mechanism & High Quality Sealing System**
PVC-O Pipes are supplied with company fitted anti-termite EPDM rubber sealing ring bonded to plastic retaining element which holds the seal securely in position during transport and pipe assembly.
- **Low Embodied Energy**
It requires minimal energy to manufacture PVC-O pipe as compared to Ductile Iron, uPVC and HDPE pipes thus giving it less than half the carbon footprint of Ductile Iron pipes.
- **Environment Friendly**
PVC-O Pipes has no additives containing toxic heavy metal compounds, such as lead based materials. PVC-O pipes are most eco-friendly pipes available in the market.
- **Low Cost**
PVC-O pipes are approximately 30% - 50% cheaper than Ductile Iron pipes whilst maintaining the same pressure handling capabilities as Ductile Iron pipes and better physical and mechanical properties like strength and ductility.
- **No Extra Filler Content**
The perform pipe must be flawless in order to survive the expansion process, the process acts as its own quality control.
- **100% Recyclable**
PVC-O pipes are 100% recyclable at the end of their service life as permitted by the manufacturing standard ISO 16422:2006 (5.2 Re-work Material, ISO 16422:2006)
- **Lower Pumping Cost**
Due to smooth surface and larger inner diameter of PVC-O pipes the pumping cost is about 20% lower than the Ductile Iron pipes.
- **Excellent Response to Water Hammers**
PVC-O pipes offer lower celerity than other piping systems (four times less than ductile iron pipes)

- **Unbeatable Impact Resistance**
Molecular orientation give PVC-O pipes layered structure which results in higher impact strength as compared to other pipes. PVC-O pipes are virtually impossible to destroy by impact.
- **Crush Resistant**
The molecular orientation of PVC-O pipes allows it to withstand extreme compression and be crushed flat without cracking, splitting or failing.
- **Increased Hydraulic Capacity**
PVC-O pipes have smooth bore which stays smooth over long years of service which gives low flow resistance with no loss in carrying capacity, C=150.
- **Maximum Flexibility**
Due to the excellent elasticity of PVC-O pipes they can bear deformation up to 100% of their internal diameter. Its increased flexibility means a reduced bending radius that allows it to fit around gradual curves.
- **Crack Resistant**
The layered structure of PVC-O pipes do not allows the crack to propagate over the subsequent layers thus resisting the pipe from cracking.
- **Low Weight, Easy Handling & Transportation and Lower installation Cost**
PVC-O pipes are approximately 6 to 12 times lighter as compared to Iron pipes.
- **Better pressure Handling & Strength**
The allowable working pressure for PVC-O Pipe is equivalent to Ductile Iron Pipe. The ultimate tensile strength of PVC-O pipe is two times the tensile strength of uPVC pipe and is equivalent to that of Ductile Iron pipe.
- **Chemically Inert & Corrosion Resistant**
PVC-O pipes are chemically inert towards almost all substance found in nature such as micro and macro organisms which results in longevity.
- **Optimal Use of Water Resources**
Infrastructures created with PVC-O pipes are a tool for managing water resources for generations to come.

Contact Details

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