Comparison of 1000mm deep fiber optic corrugated pipes for rail transit with imported brands

Overview

Telecommunication Pipes Neproplast Telecommunication Pipes are high-quality conduit solutions for modern fiber optic networks, Corrugated Optic Duct Overvi.

Key Takeaways

Domestic 1000mm HDPE corrugated pipes meet TS EN 13476-3 standards with SN4/SN8 strength, offering comparable mechanical performance and installation advantages to imported fiber optic conduit brands.Material and Standards

Domestic 1000mm HDPE corrugated pipes, such as those from ESEN, are manufactured from high-density polyethylene (HDPE) and comply with TS EN 13476-3, ensuring durability and resistance to environmental stress . They are available in SN4 and SN8 stiffness classes, with SN8 pipes capable of withstanding minimum external loads of 63 kN/m², suitable for heavy rail transit applications . Imported brands, like Neproplast and Allwire, also use HDPE with specialized inner layers (e.g., siliconized for low friction) to protect fiber optic cables and ensure smooth installation .

Mechanical Strength and Load Resistance
• Domestic pipes (ESEN, KAI): SN4 withstands 31.5 kN/m², SN8 withstands 63 kN/m². The corrugated design provides enhanced structural integrity, preventing deformation under traffic loads and ground movement .

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• Imported pipes: Typically designed for crush resistance and flexibility, with reinforced inner layers to reduce friction and protect fibers during installation . Both domestic and imported pipes are suitable for underground and high-load environments, but domestic SN8 pipes are specifically tested for rail transit load conditions.

Installation and Connection

Domestic 1000mm pipes feature improved connection methods with pre-prepared pitches and mutual holes, ensuring secure jointing and preventing separation during earthquakes or heavy traffic . Imported brands often emphasize flexibility and low-friction inner ducts, facilitating easier cable pulling and reducing fiber damage risk . Both types support modular installation, but domestic pipes may offer additional mechanical stability at connection points, which is critical for rail transit.

Durability and Environmental Resistance

• Domestic HDPE pipes: Resistant to chemical corrosion, UV exposure, and ground movement, with long service life in harsh underground conditions .

• Imported fiber optic conduits: Designed for mechanical stress, environmental exposure, and long-term reliability, often with multi-color options for identification and maintenance .

Cost and Local Availability

Domestic 1000mm HDPE pipes are generally more cost-effective due to local production and compliance with national standards, while imported brands may offer specialized features like siliconized inner layers or enhanced flexibility, which can increase cost .

SummaryFeatureDomestic 1000mm HDPE PipesImported Fiber Optic PipesMaterialHDPEHDPE with optional siliconized inner layerStandardTS EN 13476-3International telecommunication standardsStiffnessSN4 / SN8Flexible, crush-resistantLoad Capacity31.5 – 63 kN/m²High, designed for underground stressInstallationImproved connection, secure jointsLow-friction inner ducts, flexibleDurabilityUV, chemical, seismic resistantMechanical stress and environmental resistantCostLower, locally producedHigher, specialized features

Conclusion: Domestic 1000mm HDPE corrugated pipes provide robust mechanical performance, secure installation, and cost advantages for rail transit fiber optic applications, while imported brands offer enhanced inner duct features and flexibility. Selection depends on project-specific requirements, including load conditions, installation complexity, and budget .

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Article Content

COD (Corrugated Optic Duct) Pipe | tradekorea

- COD used to protect fiber optic cables - Unique design (Outer duct is spiral corrugated type, inner duct is straight duct) - It is able to

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