

Innovative Solution for Water Supply in Extreme Terrain



Dalvian SA Implements Pexgol for Potable Water Pipeline in the Mountains.



Dalvian Argentina | 2024

• Working Conditions

Temperature: -10°C to 40°C / 14°F to 104°F
Flow Rate: 50 liters/min
Pressure: 13 bar
Fluid Components: Potable water

• Pexgol Pipe

Pexgol 90 mm, class 10 & 15

• Application

Potable water aqueduct

• Length

4300 m / 14107 ft

The Challenge

Dalvian S.A., an Argentinian company, faced the challenge of supplying potable water to a remote mountain outpost with extremely difficult access. The characteristics of the terrain—sharp rocks, steep curves—and harsh weather conditions made the installation of a buried aqueduct a complex task. Additionally, the pipeline needed to cross the only access road to the outpost, demanding maximum precision and durability from the installed material.

Conventional materials posed significant risks in this environment, including potential damage from impact and wear due to the aggressive terrain. A material was required that could withstand mechanical stresses, endure extreme temperatures ranging from -10°C to 40°C, and ensure efficient installation under such adverse conditions.

The Solution

Pexgol provided the ideal solution for the project with its 90 mm pipes, class 10 and 15, supplied in long sections and coils to facilitate transport and installation in the challenging mountainous environment. Pexgol pipe was selected due to its:

- **High mechanical strength:** Capable of withstanding the impact of sharp rocks during installation and operation.
- **Flexibility:** Allowed adaptation to the terrain's unexpected curves and turns without compromising structural integrity.
- **Long lifespan and durability:** Resistant to extreme weather conditions and the stresses of the terrain.
- **Easy handling:** Its lightweight nature and availability in coils reduced the time and resources required for installation.

The installation process included the use of electrofusion couplings, double mechanical connectors, and flanged couplings, ensuring a safe and reliable system. With the help of a pipe uncoiler, the pipeline was installed in just three days, including excavation, connections, and backfilling the line to protect it and allow passage through the only access road.



The Advantages of Pexgol Pipe Systems



High resistance to wear

Pexgol is the preferred solution for abrasive materials transportation. Typically resists three times more than HDPE and twice more than steel.



Superb internal and external corrosion resistance

Our pipes are proven to withstand decades of exposure to corrosive environments, with nonstop performance in some of the world's harshest environments.



Excellent chemical and corrosion resistance

Pexgol pipes can resist a wide range of chemical agents, slurries, toxic and radioactive materials.



Long pipe sections

Pexgol pipes can be supplied in long coil lengths, reducing number of joints, installation time and risks.



High temperature resistance

Working temperatures can range from -50°C / -58°F up to 110°C / 230°F .



Creep and impact resistance

Pexgol pipes can withstand high amounts of axial and radial stresses and are highly resistant to impact, fracture and fatigue. Furthermore, Pexgol pipes are completely resistant to cracks even when dragged over sharp rocky terrain and coagulated salt crystals.

For more information please visit:
pexgol.com

