



MULTI-LAYER
HDPE PIPES

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Multi-Layer HDPE is the answer to stress cracking in PE pipelines due to point loading on the PE pipe usually from sharp stones or rocks in the trenching or bedding material.

In fact, Muna Noor Multi-Layer HDPE pipes can be laid without additional bedding materials by simply backfilling with the original excavate material (subject to guidelines being followed).

Multi-Layer HDPE pipe is a co-extruded three layer pipe made from PE 100 and special PE-100RC materials. The inner and outer layers have superior performance characteristics against abrasion and point load effects and are made of the innovative, extremely robust plastic PE-100RC.

This new generation of Multi-Layer HDPE pipe is ideal for the poor and stony soils of the Oman and other GCC & MENA countries which can produce high stresses in the pipe wall when sharp objects press on the buried pipe.

The challenge was to develop a pressure pipe of which the service life would not be affected by outside damage (scoring and point loads). Point loads were an increasing danger when new installation techniques (e.g. trenchless applications and installations without sand embedding) were introduced.

To meet this challenge Multi-Layer HDPE pipe was developed as a co-extruded three-layer pipe with inner and outer protection layers. The middle layer is made of black coloured PE 100 material and the outer layer is made of PE100RC a special material that prevents stress-crack propagation when sharp objects (stones) press upon the outer layer.

The three layers are fully integrated and cannot be separated mechanically.

The Omanplast™ Multi-Layer HDPE pipe system provides optimum protection against point loads and surface damage. Ensuring very long service life even with outside damage.

The resistance to crack offered by PE 100-RC materials is approximately ten times the resistance of conventional PE 100 materials.

When trenching pipe, the pipe installation can be made with excavated trench material with no need for expensive bedding materials such as sand or fine gravel.

When installing by horizontal drill methods or mole ploughing Muna Noor Multi-Layer HDPE is perfect as the scratches sustained by the pipe will have no effect on final pipe strength.

Additionally PE Multi-Layer HDPE pipe can be lined with a highly abrasion resistant inner layer for moving materials such as mining slurry or pumping sands during dredging operations.





There are many novel applications for Multi-Layer HDPE. Please contact Muna Noor directly with your piping problem and we will evaluate the issue and see if we can provide a suitable solution. Regarding the flexibility and fuse-ability of Multi-Layer HDPE pipes, this can be assumed to be as regular PE 100 pipes.

Applications

Omanplast™ Multi-Layer HDPE is manufactured for many applications, including the supply of drinking water and gas, especially for trenchless applications and installations using the native soil as backfill.

Omanplast™ Multi-Layer HDPE is also suitable for sewer applications. Multi-layer HDPE pipes can be installed as easily as traditional PE 100 pipes and have the same fusion characteristics. The pipes and fittings can be connected by butt-fusion or electrofusion as well as other standard jointing techniques.

Omanplast™ Multi-Layer HDPE pipes are available in various pressure classes and colour configurations in pipe lengths of 12 or 18m and smaller diameters in coils.

For potable water applications, Omanplast™ Multi-Layer HDPE is available in blue with a black coloured middle layer. For gas applications pipes are coloured orange, sewer pipes are dark green, or any colour necessary to meet customer requirements.

Muna Noor Omanplast™ Multi-Layer HDPE pipes can also be used where internal abrasion is an important factor. Resisting wear from mining slurry and dredging sand.

Standards PE 100 fittings can be used to complete the system.

To find out more about the benefits of using Multi-Layer HDPE pipes in your project, please contact our team today.

Muna Noor Multi-Layer HDPE: excellent solution for water, gas and industrial supply, because:

- The good properties of PE 100 pipes remain
 - Light weight
 - Fused joints
 - Axial flexibility
- Extras are offered to the Installer
 - No sand-filled trench bedding needed
 - Resistance against point loads frequently occurring with modern installation techniques.
- PE pipes and fittings supplied by Muna Noor meet all requirements in accordance with the respective EN and ISO standards, such as:
 - EN 12201 for potable water & pressurized sewer applications
 - ISO 4427 for potable water
 - EN 1555 / ISO 4437 for gas applications.
 - GIS PL2/2 / GIS PL2/8

ABOUT MUNA NOOR

Muna Noor is one of Oman's leading manufacturers and suppliers of plastic pipe systems, meeting the needs of the construction, civil, agricultural, industrial and petrochemical industries, primarily in the Middle East, but also supplying Asia and North Africa.

To date Muna Noor's divisions deliver large-scale and bespoke uPVC, HDPE, DWC and Multi-layer HDPE pipes, fittings, plastic fabrication, lining for steel pipe, traditional and electro fusion welding solutions, complete irrigation systems, SCADA control systems and a multiplicity of valves and controls for water.

The company continues to develop product state-of-the-art solutions with the aim to exceed client expectations and collaborate on new and exciting projects.

As an ISO 9001:2008 certified company, our primary commitment is to deliver quality products and services to clients. Muna Noor's quality and success has also been recognised by financial industry leaders in the region and has been made a subsidiary by the Boubyan Petrochemical Company (K.S.C), which is a blue chip company of the Kuwait Stock Exchange and premium institution in Kuwait for investment in the field of petrochemicals by the private sector.



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