

A red Linde forklift is shown in profile, lifting a large stack of blue Uponor Barrier PLUS pipes. The pipes are stacked horizontally and are secured with blue straps. The forklift is positioned in front of a large industrial building with a grey facade and a large open bay door. The sky is clear and blue. The text 'uponor' is in the top right corner, and 'Handling instructions Uponor Barrier PLUS' is in the center. The Linde logo is visible on the side of the forklift.

uponor

Handling instructions

Uponor Barrier PLUS

Introduction

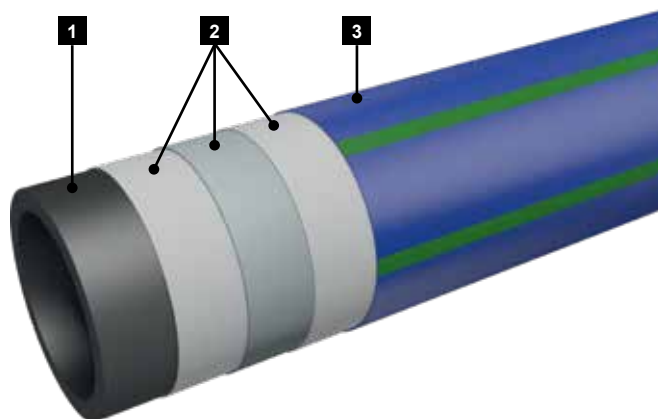
Uponor Barrier PLUS is a new pressure pipe system for potable water for use in polluted soil and in risk areas. The pipe has a fully plastic and seamless barrier layer and is available in diameters OD 32–250mm in pressure classes PN10 and PN16.

Uponor Barrier PLUS safeguards potable water from toxic chemicals, bad taste and odours for at least 50 but even up to 100 years. It provides chemical resistant pipe systems when renovating existing pipelines or building new in polluted soil or other high-risk areas.

Structure

The five-layer structure of the Uponor Barrier PLUS:

1. The core pipe is a standard PE100 pipe.
2. The barrier layer creates the protection against chemicals, and consists of non-permeable polymer barrier placed between two layers of adhesive.
3. The outer PE layer protects the barrier layer from damages.



Handling

Because of their special structure Barrier PLUS pipes require more careful handling than standard PE100 pipes. The pipes must be transported and stored in their own packages. Do not remove from original packaging until necessary. The lowest recommended temperatures for handling Barrier PLUS pipes are -20°C for straight pipes and -15°C for coils.

Cutting the pipe

It is important to avoid damage to the barrier layer. Do not use a chainsaw to cut the pipes in dimension 160-250mm. A pipe cutter tool or a fine-toothed hand saw is recommended. Peel the outer layers from the core pipe welding area immediately after cutting the pipe.

If the protection layer is damaged

The purpose of the protection layer is to protect the barrier layer. If the protection layer is damaged, e.g. by a deep scratch, the barrier properties of the pipe might be affected.

The damaged area has to be removed or protected against chemicals. This protection can be carried out with aluminium tape.

The width of the aluminium tape must cover the damaged area and have 50mm overlap on each side over intact layers. The aluminium tape has to be protected against mechanical stress with bitumen tape.



NOTE! The protection layer protects the barrier layer, it does not protect the PE pressure pipe against mechanical stress. A damaged protection layer is a risk for water contamination.

Jointing

Standard PE100 pipe systems can be used with Barrier PLUS.

Jointing methods for Barrier PLUS pipe are:

- Butt welding
- Electrofusion
- Mechanical jointing

All outer layers have to be removed from the core pipe welding area immediately after cutting the pipe. The PE outer layer and barrier layer are adhering so they can be removed in one step. After joining, the connection area has to be protected against chemicals.

Protect the connection area

The connection area can be protected with aluminium tape or Barrier Wrap (for a fully plastic solution) to withstand permeation of contaminants after jointing. When in place, the aluminium tape has to be protected against mechanical stress, e.g. with a shrink sleeve or bitumen tape.

Warnings

- All outer layers have to be peeled from the core pipe welding area immediately after cutting the pipe
- Ensure overlap on each sides of the connection area, recommended width of the overlap is 50mm
- Keep a proper distance from the surface with radiant used for shrink elements
- Use a "soft" yellow flame. Be aware that a pointed blue flame can destroy the shrink element and the pipe.
- Keep radiant moving constantly, overheating can destroy the shrink sleeve and pipe!

See separate instructions for installation with Barrier Wrap or aluminium tape joint protection

Peeling the layers

Peel the outer layers from the core pipe welding area immediately after cutting the pipe.

No special equipment is needed for cutting the surface layer. The core pipe must not be damaged when cutting the outer layer.



1. Use a tool to cut the protection layer. To make the removal easier it is better to remove maximum 50mm wide longitudinal slices at a time.



2. Grip the edge of the layer with pliers and roll the part that is to be removed around the pliers.



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