MOM document PE 100 RC pressure pipes with peelable PP-layer - RobustLine RC

Product PE 100 RC pressure pipe with peelable PP-layer for water supply and sewage

Producer(s) Pipelife Norway AS, Stathelle

Usage Pressure pipes for onshore water supply, marine application or other pressure-based or pressure-less fluid transport.

Technical data

Dimensions:	110 mm – 400 mm in lengths from 12m or other
Pipe class:	SDR 17, SDR 11 or other SDR class on request
Material in service pipe:	Polyethylene MRS 10.0 (PE 100) RC
Color of service pipe:	Black or black with blue stripe or red-brown stripe
Density of service pipe:	Approx. 0.96 kg/dm^3
Material in coating:	Polypropylene co-polymer (PP)
Color of coating:	Blue or red-brown
Density of coating:	Approx. 0.9 kg/dm^3

Certification Certified in accordance with EN 12201 for SDR 26 – SDR 7.4 (Nordic Poly Mark). Drinking water certification in accordance with Danish requirements (DK-VAND).

HSE (health, safety and environment):

Fire hazard Ignition temperature >320°C, no real hazard.

Health hazard No health hazard with normal use, only with fire. The greatest hazard from fire gases is the presence of CO. The gas is odorless and carries both acute and toxic effects. Symptoms include dizziness, fatigue, headache, nausea and irregular breathing.

Treatment Ensure fresh air and see a doctor if experiencing any of the above symptoms.

Pipelife Norway AS is certified in accordance with EN ISO 9001 and EN ISO 14001

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Handling and maintenance

Storage

Storage of PE pipes, lengths from 12m – 15m:
The pipes are stored on crossbars on a relatively flat foundation. The storage area should have no sharp rocks or similar that could damage the pipes during storage. For pipes from 12-15 m 4-5 crossbars should be used. The crossbars should be pulled in at least one meter at both ends to prevent deformation on the spigots. Pipes with SDR class SDR 11 – SDR 7.4 can be stored in three heights, but we recommend storage in two heights – as is the case with pipes of a higher SDR class. Measures to prevent the pipes from collapsing and do damage to persons or equipment shall be taken when storing pipes that have been delivered separately.

Storage of PE pipes – pipes delivered as tow:
PE pipes delivered as tow in lengths up to 500 meters are stored floating on sea. The pipes are moored to moorings and/or other points that ensure responsible storage of the pipes. The pipes are moored in each end and other points along the pipe if required. The storage area should be somewhat sheltered from weather conditions and placed in a way that does not obstruct sea traffic. PE pipes that are stored offshore on warm days can twine. Secure both ends of the pipe to prevent twining. The pipes are not damaged by twining, but could prove harder to separate.

Recommended maximum outside storage time is 1 year. However, the plastic material does not deteriorate significantly from long-term outside storage in our climate.

Jointing methods

- Mirror/butt-welding: Only pipes of the same dimension and SDR class can be mirror-welded.
- Electro sockets: Pipes of the same dimension, but of different SDR class can be welded using electro sockets.
- PE pipes can be jointed using welded stub ends and flanges.

Pipelife Norway recommends one of the three above-mentioned methods. In addition, there are several types of mechanic connectors to be used when jointing PE pipes. The protective coating is removed in the jointing area.

Welding PE pipes with PP-coating

Welding of PE pipes is performed in accordance with NS 416 and DS/INF 70. Welding shall be performed by a certified welder using a certified welding machine. When butt-welding, remove the PP-coating on the pipe ends to avoid melted PP material between the welding surfaces. The machine's trays must be adjusted for the pipe's outside diameter with coating.

When welding using electrofusion sockets, remove the PP-coating to prevent the coating from coming into contact with the socket. Suitable equipment shall be used to remove the coating and the PE pipe should not be subjected to unnecessary rifts.

Installation of flanges

Flanges that are installed on a PE pipe shall be rounded on the inner part facing the stub end in a way that prevents damage during the installation. Flange measurements for PE pipes: See our brochures. Outside welding bulbs are removed where necessary to install the flange. Use bolts from the same material as the flange. Choice of material is done based on the environment in which the flange connection will be.

Tightening of flange connections

Torque tightening is required to ensure prestressing of the stub end/flange connection during installation of flange connections where PE stub ends are included. Ensure that the stub end abuts with the entire contact face against the connection point BEFORE initiating tightening to secure an optimal and durable tight flange connection. Any obliquities shall be fixed BEFORE initiating tightening, the same goes for any distance to the connection point. Tightening to fix obliquities or distance between stub end and connection point can cause damage to the pipe/stub end or cause insufficient prestressing/force in the contact area between stub end and connection point.
Obliquities are often fixed by adjusting the pipe towards the connection point before the installation of the flange connection. Adjusting the distance towards a fixed flange can be done by adding a small curve on the pipe in the ditch before the flange connection, which enables sideways adjustment of the pipe.
We recommend that the flange connection remains uncovered until pressure testing has been carried out.
Tightening of bolts in a flange connection is done by “crosswise” tightening the bolts little by little. Final bolt tightening in the flange connection shall be done the necessary amount of times after the first tightening to ensure the necessary torque in the flange connection is maintained.
Flange connections are torque tightened. Contact Pipelife Norway AS for more information.

Installation of entering pipe	Entering pipes that are installed on a PE pipe shall be rounded on the inner part facing the stub end in a way that prevents damage during the installation. Flange measurements for entering pipes for PE pipes: See our brochures. Coating and outside welding bulbs are always removed before installing the entering pipe. Use bolts from the same material as the entering pipe.
Fittings/spare parts	The pipes are suited for fittings developed for the pipes. See the product catalogue. Damaged pipe is preferably replaced with a similar product. Spare parts can be acquired through wholesaler or through direct contact with the producer.
Service/maintenance	The product itself requires no service/maintenance. However, the pipe system could require maintenance depending on the operating conditions.
Other forms than water or ordinary waste water	Decomposition of the pipe material could happen after repeated, large discharges of different industrial substances. Pipelife Norway AS should be contacted concerning such fluid transport.

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