

Texts for bids and tenders for supply technology

PE 100 Drinking water pipes

Material and manufacture

Only pipes and fittings with a quality assurance certificate granted by TÜV Süddeutschland Bau und Betrieb GmbH and an approval mark MUC-KSP-A 006 may be used. In accordance with GW 335 A2, DIN EN 12201 and B2 ("Kunststoffrohrleitungssysteme in der Gas- und Wasserverteilung; Anforderungen und Prüfungen – Teil A2: Rohre aus PE 80 und PE 100 – Teil B2: Formstücke aus PE 80 und PE 100" – plastic piping systems deployed in gas and water distribution; requirements and testing – Part A2; pipes made of PE 80 and PE 100 – Part B2), only pipes and fittings made of PE 100, with SDR 11 and SDR 17, are to be used.

Static verification for underground drinking-water pressure pipes is to be performed according to the rules and standards outlined in the Advisory Leaflet ATV-DVWK-A 127 "Static evaluation of wastewater channels and lines" of the ATV-DVWK [German Association for Water, Wastewater, and Waste Management].

The dimensions and tolerances for the pipes must correspond to DIN 8074. The general quality requirements and their testing are to be satisfied according to DIN 8075. For fittings, DIN 16963-5 is to be attached. The pipes must be coloured throughout with royal blue (RAL 5005) or black with blue stripes. On request, the documentation of the pipe and fitting quality is to be submitted by the bidder through working certifications according to DIN EN 10204-3.1.

The manufacture of pipes and fittings is to be verified with a quality management system according to DIN ISO 9001.

Storage, Laying, and Pressure Testing

During storage, it must be guaranteed that there is no permanent deformation or damage. Stacks of pipes should not be higher than 1.5 m. Sudden external forces are to be prevented. Pipes or fittings damaged by transport or storage are to be eliminated. This applies also to pipes that have marks with a depth of more than 10% of the wall thickness due to transport.

For the laying work, only pipeline construction firms may be hired that possess DVGW certification according to DVGW Advisory Leaflet GW 301 "Method for granting DVGW certification for pipeline construction companies." For construction, only personnel that have been trained and approved according to the DVGW Specification GW 330 "PE welders; training and testing plan" are to be used for the laying work.

Welding by means of heated-tool butt welding is to be performed according to DVS 2207 Part 1 "Welding of thermoplastic materials; heated-tool welding of pipes, pipeline fittings, and sheets made of HDPE." The processing data for the welding is to be recorded and delivered to the customer after completion of the welding work.

The laying is to be performed according to DIN EN 805 "Water supply, requirements on water supply systems and their components outside of buildings." In addition, the laying instructions A 135 of the Kunststoffrohrverband KRV [Association for Plastic Piping] are to be followed.

The compression trial on the piping system is to be performed according to DIN EN 805.

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PE 100 SPC-Drinking water pipes

Material and Manufacture

SIMONA SPC-Drinking water pipes can be used as drinking water pressure pipes in the field of drinking water. The pipes correspond to the quality requirements of DIN 8074/75 and TÜV Süddeutschland. For Drinking water fields applies the demands according DIN EN 12201 and DVGW-Regelwerk GW 335 A2.

The materials for use in drinking water supply correspond to the raw materials listed in the GKR material lists (types of materials for drinking water).

Manufacturing is performed in a continuous production process by means of a coextrusion procedure. The protective jacket that is mounted on the tool-side on the inner pipe and that is made of modified polypropylene is used as protection from external material damage of the inner pipe during laying and while the pipe is in service. The axial shear strength between inner pipe and protective jacket is ≥ 3.0 N/mm² (testing according to DIN 53769). The quality is guaranteed according to the rules of DIN EN ISO 9001, as well as the requirements of the RAL mark of quality. Quality verification according to DIN EN 10204, acceptance test certification 3.1.

Storage, Laying, and Pressure Testing

Laying is done according to the instructions of the corresponding KRV laying guidelines, as well as manufacturer instructions. Processing is to be performed according to currently valid technical regulations for pipeline construction, e.g., DVS guideline DVS-2207-1 (Welding of thermoplastic materials) or DVS-2208-1 (Machines), as well as appropriate standards. Laying is done according to DIN EN 1610, KRV laying instructions, as well as corresponding DVGW guidelines and corresponding manufacturer instructions.