Questionnaire for pipe design

Condition for the calculation of buried pipes

For the use of sewer pipes made from HDPE the mathematical proof in accordance with ATV A 127 is a standard procedure. The design of the profile for the pipe wall depends on the load condition. Please fill out the form below and send it to TNS Co.:

Project _____

_____

Owner of project _____

_____

1. Dimensions resulted from the hydraulic calculation

inside diameter (mm) _____
descente (‰) : _____

2. Installation conditions

☐ Dam

☐ Trench

Width (m) _____
Angle trench wall (°) _____

3. Embedding conditions:

☐ B1 Compaction layer by layer against solid ground or layer by layer in the filling of a dam (without control of the degree of compaction)

☐ B2 Vertical trench support in the pipe zone with trench sheets or light sheet pilling, which are removed after compaction only. Trench plates and other equipment only under the condition that the compaction of the soil is guaranteed after removal of the support. Jetting of the backfill (just possible for soil group G1).

☐ B3 Vertical trench support in the pipe zone with trench sheets, wooden pillars, trench plates or other equipment, without an effective compaction after the removal of the support.

☐ B4 Compaction layer by layer against the solid ground or layer by layer in the filling of a dam with control of the degree of compaction according to ZTVE-StB., chapter 4.2. This embedding method is not possible for the soil group G4.

4. Soil group

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The following soil groups can be defined (short form according to DIN 18196)	**pipe zone** proctor density in %						**backfill** proctor density in %					
	85	90	92	95	97	100	85	90	92	95	97	100
Group 1: Non cohesive soils (GE, GW, GI, SE, SW, SI)												
Group 2 : Slightly cohesive soils (GU, GT, SU,ST)												
Group 3: Cohesive mixed soils, silt (cohesive sand and gravel, cohesive stoney natural soil) (GU, GT, SU, SR, Ul, UM)												
Group 4: Cohesive soils (clal, loam) (TL, TM, OU, OT, OH, OK)												

Others:

5. Cover above pipe crown

maximum (mm) _____
minimum (mm) _____

6. Traffic load according to DIN 1072 (No Traffic)

☐ SLW 60
☐ SLW 30
☐ Truck 12

7. Ground water

☐ under pipe soil

☐ above pipe soil

long term (mm) _____
short term (mm) _____

8. Safety factor

Table 13 (ATV A 127): safety factors, collapse due to instability (prior deformation is taken into consideration).

☐ Safety class B Y = 1, 6

☐ Safety class A Y = 2,0

Location, date Company, signature