

DIN 18126:2022-10 (E)

Soil, investigation and testing - Determination of density of non cohesive soils for maximum and minimum compactness

Contents	Page
Foreword	4
1 Scope	5
2 Normative references	5
3 Terms and definitions.....	5
4 Designation	7
5 Apparatus	7
5.1 Vibrating table test	7
5.2 Two-prong impactor test.....	16
6 Particle size range covered by the test, mass and type of sample	16
7 Test procedure.....	18
7.1 Sample preparation.....	18
7.2 Test sequence	18
7.3 Determining maximum density.....	18
7.3.1 Selecting the test method	18
7.3.2 Vibrating the sample on the vibrating table.....	18
7.3.3 Vibrating the sample with the two-prong impactor	18
7.4 Determining minimum density	19
7.4.1 Selection of the test cylinder	19
7.4.2 Selecting the test method	19
7.4.3 Introducing the sample through a funnel.....	19
7.4.4 Introducing the sample by means a of a long-handled scoop or hand scoop.....	19
8 Evaluation.....	20
8.1 Maximum density.....	20
8.2 Minimum density	20
8.3 Derived quantities	20
9 Expression of results.....	21
Annex A (informative) Application examples.....	22
A.1 EXAMPLE 1 — Test DIN 18126-250	22
A.2 EXAMPLE 2 — Test DIN 18126-71	24
Bibliography.....	27

Figures

Figure 1 — Loading plunger with spring and weight for the vibrating table test for determining the maximum density.....	9
Figure 2 — Loading plunger	10
Figure 3 — Weight holder	10
Figure 4 — Guide rod.....	11

Figure 5 — Funnel with device for centric lifting of the funnel to determine the minimum density	12
Figure 6 — Long-handled scoop	13
Figure 7 — Hand scoop	13
Figure 8 — Test cylinder with filter plate and extraction device for determining maximum density by the two-prong impactor test	14
Figure 9 — Two-prong impactor	15
Figure 10 — End plate for test cylinder as in Figure 8	15
Figure 11 — Test cylinder for two-prong impactor test for determining minimum density	16

Tables

Table 1 — Elements of the standard designation	7
Table 2 — Dimensions for Figure 1 to Figure 4	8
Table 3 — Maximum permissible particle size and required sample mass as a function of the test cylinder diameter	17
Tabelle A.1 — Determining the dry density based on three tests of the maximum density	23
Tabelle A.2 — Example of dry mass and dry density based on three tests of the minimum density	23
Tabelle A.3 — Example of dry mass and dry density based on three tests of the minimum density	24