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**Geotechnical investigation and  
testing — Laboratory testing of soil —**

**Part 12:  
Determination of liquid and plastic  
limits**

**AMENDMENT 2**

*Reconnaissance et essais géotechniques — Essais de laboratoire sur  
les sols —*

*Partie 12: Détermination des limites de liquidité et de plasticité*

*AMENDEMENT 2*





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# Geotechnical investigation and testing — Laboratory testing of soil —

## Part 12: Determination of liquid and plastic limits

### AMENDMENT 2

#### 4.2.2.2, Table 1

Replace Table 1 with the following:

**Table 1 — Set of fall cones — Typical manufacturing specifications for masses and dimensions**

Mass of cone plus shaft	g	$60 \pm 0,06$	$80 \pm 0,08$
Tip angle $\beta$	°	$60 \pm 0,3$	$30 \pm 0,3$
Height of the cone tip $h$	mm	$\geq 20$	$\geq 30$
The deviation $a$ from the geometrical tip at manufacturing	mm	$< 0,1$	$< 0,2$

#### 4.2.2.4

Replace the text with the following:

The maximum wear  $b$  shall be less than 0,3 mm for the 60 g/60° cone and less than 0,6 mm for the 80 g/30° cone (see Figure 2).

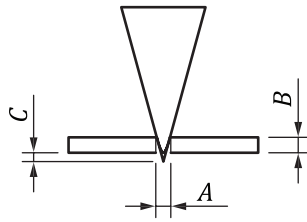
#### A.3.6.1

Replace the text with the following:

Before the first use on each day of use, check the sharpness of the cone tip, the surface finish on the cone and the free fall of the cone.

To ensure that the point remains sufficiently sharp for the purposes of the test, the cone should be replaced if the point can no longer be felt when brushed lightly with the tip of the finger when the tip is pushed through a hole  $(1,50 \pm 0,02)$  mm in diameter, drilled through a metal plate  $(2,20 \pm 0,02)$  mm thick for a 30° cone or a  $(1,00 \pm 0,02)$  mm thick metal plate for a 60° cone. This is shown schematically in Figure A.1.

Other gauge dimensions may be used providing the ratios of its thickness to the diameters of the holes are maintained. The maximum permitted degree of wear of the cone tip (4.2.2) corresponds to the worn tip being flush with the bottom of the metal plate.



**Key**

- A* hole diameter  $1,50 \pm 0,02$  mm
- B* plate thickness  $2,20 \pm 0,02$  mm  
for a  $30^\circ$  cone, or  
plate thickness  $1,00 \pm 0,02$  mm  
for a  $60^\circ$  cone
- C* maximum tip wear 0,6 mm for a  $30^\circ$  cone, or 0,3 mm for a  $60^\circ$  cone

**Figure A.1 — Cone tip sharpness check gauge**

The surface finish of the cones shall be visually checked before use on each day of use to ensure no significant scratches or corrosion is visible.

The cone mass, dimensions and total tip wear shall be verified at least annually to ensure the requirements of Table 1 and 4.2.2.4 are met.