

## ISO 8124-4 Impact Head from Swing Elements (without Accelerometer)



### Test

Test mass, consisting of an aluminium sphere or semi-sphere of radius  $80 \text{ mm} \pm 3 \text{ mm}$ , and a total mass (including accelerometer) of  $4,6 \text{ kg} \pm 0,05 \text{ kg}$ . The impacting part between the surface struck and the accelerometer shall be homogeneous and free from voids. Cables connected to the accelerometer shall be placed in such a way that the effect on the mass of the test mass is minimized.

When tested in accordance with 6.4, swing elements shall not impart an average peak value of acceleration, measured with a cut-off frequency of 10 kHz, greater than 50 g, and the average surface compression shall not be greater than  $90 \text{ N/cm}^2$ .

This requirement does not apply to swing elements where the combined mass of the swing element and the means of suspension, as illustrated in Figure 4, is less than 1,0 kg and for which the estimated impact area is larger than  $20 \text{ cm}^2$ .

## Test Standard

ISO8124-4 6.4.1

## Procedure

Assemble and install the swing element to be tested in accordance with the manufacturer's instructions.

Suspend the swing with the means of suspension that has been supplied with the swing and at the maximum

height that these permit. If ropes or cables are the means of suspension, they may need to be stretched in

order to allow smooth travel when the swing is released during the test. If needed, apply a load of, for example,

5 kg to the end of each rope or cable and leave it for 6 h or until the ropes or cables have been straightened.

Adjust all parts of the set-up so that the suspending chains for the test mass are parallel to the means of

suspension for the swing element.

Suspend and adjust the test mass so that the contact point of the swing element and the centre of the test

mass are in the same horizontal plane as the centre of gravity of the test mass. Ensure that the chains for test

mass are not twisted and that the test mass hangs in a vertical line.

Affix an index mark to the side of swing elements that are supported by chains, ropes, cables or other

non-rigid suspending elements. The index mark may be on any part of the suspended member that is

immediately below the pivot point in the free-hanging rest position.

Swing elements that are supported by chains, ropes, cables or other non-rigid suspending elements shall be

raised along their arc of travel until the side-view projection of a straight line through the pivot point and index

mark forms an angle of  $60^\circ \pm 1^\circ$  with the vertical. Once the suspended member is raised to the test position,

some curvature will be produced in the suspending elements. Adjust the suspended

member position to  
determine that curvature which provides a stable trajectory.

