

Safe & Sound: the new acoustic requirements



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The European standard EN71-1 (mechanical and physical properties) specifies maximum acoustic limits for certain toys that emit sound intentionally.

EN71-1 has recently been revised with new acoustic requirements (EN 71-1: 2011 + A2:2013). These new requirements will take effect after the transition period which will end on 30th September 2014. Until that date, the "old" acoustic requirements may still be used to demonstrate compliance with the essential safety requirements of the Toy Safety Directive.

The major change to the standard is the introduction of new requirements for toys not previously within the scope of the standard, such as percussion toys and wind toys such as drums, xylophones and whistles. Revised test methods have also been introduced for voice toys such as megaphones and walkie-talkies.

It is important to note that unintentional sound from the operation of the toy is excluded from the requirements. Examples of such toys would be mechanical wind-up mechanisms, electric motors and marble tracks.

Under the revised standard, all toys that are clearly designed to emit sounds are now required to be assessed and have been categorised into 11 product types and 3 exposure categories:

The 11 product types:

- Close-to-the-ear toys
- Table-top or floor toys
- Hand-held toys
- Toys using headphones or earphones
- Rattles
- Squeeze toys
- Pull-along or push toys
- Percussion toys
- Wind toys
- Cap-firing toys
- Voice toys

The 3 exposure categories:

- **Exposure category 1:** Toys emitting sound during time periods typically longer than 30 seconds after each initiation;
- **Exposure category 2:** Toys emitting sound during time periods typically shorter than 30 seconds but longer than 5 seconds after each initiation;
- **Exposure category 3:** Toys emitting sound during time periods typically shorter than 5 seconds after each initiation;

The importance of sound exposure:

The acoustic requirements are based not only on the sound levels produced by the toy, but also on the daily exposure time. Studies have shown that, on average, chil-

dren play with toys and computer games between 2 and 5 hours a day at most. For the purposes of the standard, a duration of 2 hours a day has been assumed for play with sound-producing toys.

It would be unlikely that some toys would make sound for the entire playing time since some toys need to be reactivated at short time intervals. Therefore, the standard has divided toys into three exposure categories corresponding to an effective daily operating time of more than 40 minutes (exposure category 1), less than 40 minutes but more than 12 minutes (exposure category 2) and less than 12 minutes (exposure category 3).

Interpreting the standard

The interpretation of some of the new acoustic requirements, particularly the exposure categories and the classification of certain toys, are proving challenging: we frequently get asked by our clients to guide them through the different categories.

For example, would you classify a toy guitar as a hand-held toy or a percussion toy? Would the guitar be played with for the whole 2 hours and therefore be in the exposure category 1, or do you assume that a child would play with the guitar for 5 minutes and then move on to another toy for 25 minutes? In that instance, the guitar would be exposure category 2.

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