

Safety Report of Philips HX-9352

Electric Toothbrush



1. Hazards and Consequences

With the development of electronic technology, electric toothbrush has become a common sanitary product in people's life. However, at the same time, electric toothbrush also has some potential safety risks.

First, people often use electric toothbrush in bath or wet environment, so electric toothbrush has the possibility of electric leakage.

Second, the electric brush uses high frequency ground motion to replace the traditional toothbrush action and clean teeth, which can easily lead to gingival bleeding in the elderly and children due to the vibration frequency is too high.

Third, the lithium battery built in the electric toothbrush is likely to pollute the environment after the toothbrush is discarded, and its intelligence is more than that of the traditional toothbrush. Therefore, the material of the toothbrush itself needs strict supervision.

2. Hazard Prevention

This time we mainly analyze the product object for Philips electric toothbrush HX-9352.

First, in terms of waterproof and anti-leakage, the waterproof level of this product has reached the level of IPX 7, which can fully guarantee that there will be no leakage and short circuit in daily use. Under this waterproof level, it can be used normally even if it is immersed in water under certain pressure for a long time.

Second, in terms of gingival sensitive people, this product uses DuPont soft hair, and the place where the brush head is very soft, even the elderly and children can use it normally, and there is no need to worry about gum bleeding or oral infection caused by high vibration frequency.



Meanwhile, the electric toothbrush uses a suspension pulse motor, which can continuously maintain a small amplitude of high-frequency vibration and avoid oral injury caused by unstable vibration.

3. Standards and Codes

In terms of battery and toothbrush material, this product meets the Chinese GB / T 1.1 2009 standard. The lead content and mercury content in the product are lower than the standard, so it is very safe to use.

4. Adequation and Envolve

On the whole, the safety guarantee of Philips electric toothbrush is excellent. This is due to the brand's long-term investment in electric health products. At the same time, Philips electric toothbrush gradually replaces the low-power toothbrush motor and constantly changes the brush head of the toothbrush to improve its safety through clinical experiments in its own scientific research base.

5. Expectation

Of course, this product still has a lot of room for development in terms of safety. For example, this toothbrush does not have a safety lock, which may be due to the user forgetting to turn off the power. Therefore, we can strengthen the control of hazards by setting up delayed shutdown or automatic shutdown and biological design of toothbrush.

6. Comparison

Compared with the competitors, this toothbrush has a greater safety advantage. It uses less harmful materials and more flexible brush head. At the same time, the unique magnetic levitation motor not only improves the water resistance of toothbrush, but also avoids the potential safety hazard caused by violent vibration. In addition, in case of emergency, the toothbrush itself will cut off its power supply, so as to avoid leakage caused by internal fault.

Reference

- [1] Light Industry Standard for small electrical equipment GB / T 1.1 2009
- [2] Robert L. Boyd, Christopher M. Rose, Effect of rotary electric toothbrush versus manual toothbrush on periodontal status during orthodontic treatment, AJO-DO, 2004, 10.1016/S0889-5406(94)70005-2