

Silamat S6



Scientific Documentation

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1. Introduction

1.1 Capsule mixer

Dental products, such as amalgams or cements, which have to be mixed using predetermined components before they are applied, can be easily used in the capsule or injection capsule delivery form. Thus, it is possible to predose the individual components in the required quantity. Consequently, the user does not come in contact with the precursor products. This is particularly advantageous for amalgams, which would require handling with the toxic mercury. Automatic capsule mixers enable adequate and fast mixing of the individual components so that enough time is left for application. Functionality, easy operation and suitability for all mixing capsules available on the market are important criteria for these mixing devices (see Fig. 1).



Fig. 1: Selection of mixing capsules which can be used in the Silamat S6.

1.2 Silamat S6

The Silamat S6 capsule mixer is the successor product of the time-tested Silamat S5. It is characterized by an aesthetic and functional design (Fig. 2).



Fig. 2: Silamat S6

The above-average speed of 4500 rpm and the proven figure-eight mixing pattern help to achieve homogeneous mixing results. The device is very easy to operate for dentists.

2. Technical data

Rotations per minute	4500 rpm
Operating voltage	100-240 VAC
Dimensions	L x W x H = 240 x 230 x 170 mm
Warranty	3 years

3. Development tests

The Silamat S6 has been comprehensively tested in the Research and Development Department of Ivoclar Vivadent regarding its suitability for all available mixing capsules.

Product	Manufacturer	Mixing time (s)	Result
Meron AC (GIC)	521487	10	Homogeneous mixture
Ketac Fil (GIC)	3M ESPE	10	Homogeneous mixture
Ionofil Molar (GIC)	Voco	10	Homogeneous mixture
Contour (Amalgam)	Kerr Hawe	10	Homogeneous mixture
Vivacap (Amalgam)	Ivoclar Vivadent	10	Homogeneous mixture
DC-Amalgam	DC	5	Homogeneous mixture .
Lojic DP (Amalgam) **	SDI	10	Capsule compatible! / Homogeneous mixture
Gutta Flow (Root canal filling)	Coltene Whaledent	15 / 30	Homogeneous mixture with both mixing times

Table 1: Selection of tested mixing capsules with amalgam, glass ionomer cements (GIC) and a root canal filling

The Silamat S6 prototype can also be used for the mixing capsules from Lojic Plus DP Fast Gr.I. These over dimensioned capsules could not be loaded in the Silamat S5 predecessor model.

The tests have shown that the Silamat S6 is compatible with all the investigated mixing capsules for dental use. The mentioned and officially recommended mixing times achieve homogeneous results.

4. Clinical tests

A Silamat S6 prototype was provided for the internal clinic of Ivoclar Vivadent, where the device was used to mix Ketac Fil Plus Aplicaps, Phosphacem and Vivaglass CEM. No problems or technical difficulties have been encountered so far.

Dentist Dr A. Peschke highlighted the following points:

- The operation is easy and convenient.
- The membrane-sealed keypad is clearly arranged, easy to operate and can be easily cleaned by wipe disinfection.
- The housing can be cleaned easily.
- The noise level is the same as that in other mixing devices.
- The loading and removal of capsules is easy and self-explanatory.

In general, the Silamat S6 has proven itself in the clinical practice and can be recommended, since it is handy and easy-to-operate.

5. Literature

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