

LAB-FLEX™ 16 SILICONE RUBBER



Lab-Flex 16 silicone rubber is an addition silicone (polyvinylsiloxane [PVS]) duplicating material, ideal for model duplication in the dental laboratory.

The 1:1 mixing ratio between base and catalyst makes measuring and mixing easy. Lab-Flex 16 silicone rubber is suitable for mixing by hand or mechanically, because it has elevated fluidity and does not require a vacuum. It copies details precisely, has long term dimensional stability and is resistant to contact with various types of resins, investments and gypsums. Lab-Flex 16 silicone rubber is recommended for all duplication techniques.

Applications

- Duplication of dies in integral ceramic coating
- Duplication of models, generally in gypsum and/or resin
- Duplication for models in controlled expansion investment materials

Typical Material Properties*

Color	Base: Purple / Catalyst: White
Mixing Ratio	1:1
Mixing Time Manual**	1 minute
Mixing Time with Vacuum Mechanical Machine**	30 seconds
Total Working Time**	5 minutes
Setting Time**	10 minutes
Hardness (Shore A after 24 hours)	16
Detail Reproduction	20 µm
Dimensional Variation	-0.05%
Tensile Strength	2.5 N/mm ²
Elongation	550%
Tear Strength	5 N/mm ²

*These results are based on the testing methods, frequency and procedures of Ransom & Randolph or its approved suppliers. The levels referenced herein are only for general guidance and do not constitute a firm specification.

**The times mentioned above are intended from the start of the mixing phase at 73 °F (23 °C).

Recommendations & Suggestions Based on Necessary Working Time

Recommended for duplicating one single model in the same working session.

Application Instructions

Preparing the Model

Before using Lab-Flex 16 silicone rubber, check that the model to be duplicated is perfectly clean. If it needs milling, be sure to remove any oily residues; use of a solvent such as acetone is recommended. Wait for steam to evaporate, if used, and make sure that the model is perfectly dry. Select a flask of appropriate size, then anchor the model onto its base with wax.



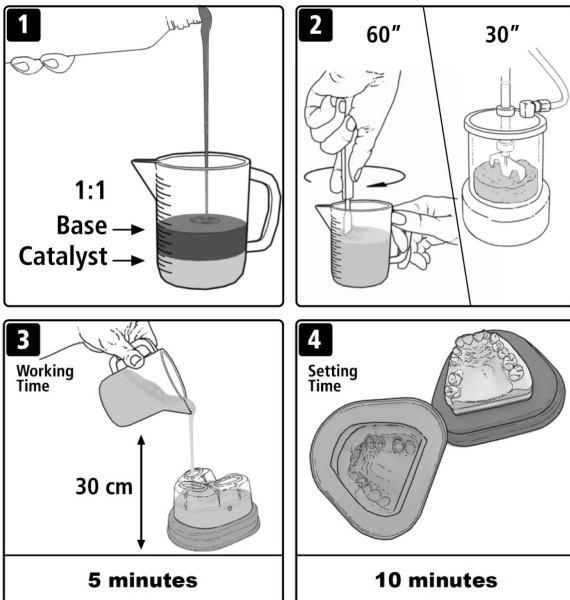
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Batching & Mixing with Manual & Vacuum Technique

1. Measure or weigh equal amounts of catalyst (white) and base (violet) in a graduated container (fig. 1).
2. Mix the two components well, until color is even (fig. 2).

Attention: Check that there are no unmixed residues or strips of color on the base and walls of the container.

Use

Slowly pour Lab-Flex 16 silicone rubber, preferably from a height of about 30 cm above the flask (fig. 3). It is not necessary to create a vacuum. If the quantity measured out is not sufficient to complete duplication, wait until the silicone has hardened completely and then add more material in the same way. The material will bind to each other and the addition will have no effect on the final result. Use a jet of compressed air between the model and the mold created. Do not use mechanical force with a knife or other implement, and do not pull it away from the flask, or you may deform the mold (fig. 4).

We recommend using Lab-Flex 16 silicone rubber at room temperature; low temperatures reduce the fluidity and enlarge the setting time, high temperatures reduce notably the setting time. For timing, working and setting times, see the values in the table below.

Lab-Flex 16 silicone rubber is compatible with all types of gypsums, investments or poured resins.

Important Recommendations

Use an exact 1: 1 ratio to ensure that timing is correct and the product's final properties are not altered. If using materials of different kinds such as die-spacers, resins, etc., you must wait for these products to stabilize completely to prevent a risk of inhibition of the polymerization reaction. The surfaces with which the material comes into contact must be perfectly clean, grease-free and dry. Close bottles after use, and do not switch their lids.

Storage

Guaranteed for 24 months if stored correctly between 41-80 °F (5-27 °C).

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