

# CAPIVA® C 03 ENABLES DEPOSITING OF CHEWING GUM

## Unlimited Shapes: Depositing Technology Enables New Variety of Shapes for Chewing Gum

Chewing gum is confectionery made by an extrusion process. As a result, the shapes available on the market have not significantly changed in recent decades. WACKER has developed a new compound to deposit chewing gum. Using this technology, it is possible to make an unprecedented variety of shapes. Plus, it is relatively easy to clean the equipment, since CAPIVA® C 03 can be removed by just using hot water or a 1% alkaline solution.

### Unlimited Shapes

CAPIVA® C 03 represents a completely new way to form chewing gum using depositing technology. This novel process increases the creativity of confectionery manufacturers to produce innovative chewing gum which can be deposited in different materials such as starch powder, silicone and plastic.

### Simple Implementation with a Ready-To-Use Premix

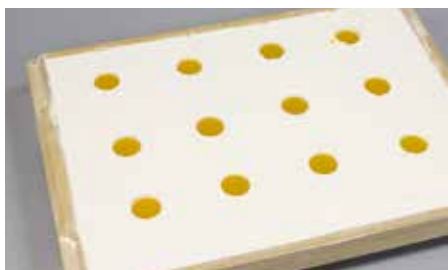
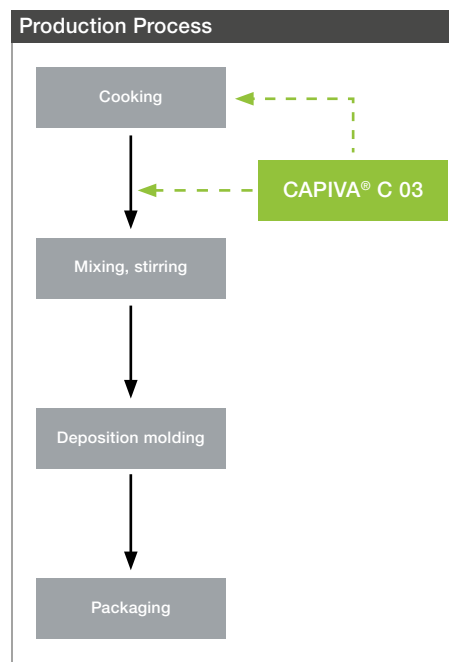
The CAPIVA® C 03 premix melts fully at approx. 100 °C and is compatible with standard candy-cooking processes and equipment. It is advisable to process the premix in a molten state. Pre-melting can be performed in a heated vessel/melter or oven. The temperature of the mass should not exceed 120 °C. At this temperature, the material can be kept for 12 h.

### Use of Existing Candy Processes and Equipment

CAPIVA® C 03 is compatible with conventional candy processes and equipment. For small-scale production, an open system using a cooking pot, heating plate and blade agitator can be used. For larger quantities, batch cookers are a good option. For continuous cookers, addition of the melted premix after the cooking stage is recommended. Molding techniques can be used with existing molding equipment, such as mogul lines, which are normally used to produce jellies.

### Compatible with Sugar and Sugar-Free Systems

CAPIVA® C 03 is compatible with sugar- and polyol-based (sugar-free) systems. Detailed guide formulations and step-by-step instructions are available on request.



**Composition of Deposited Sugar-Free Chewing Gum**

	<b>Ingredients</b>	<b>Part [%]</b>
	Polyols	60.5
	Fat	5.7
<b>(A)</b>	Water	4.8
	Glycerol	2.7
	Food acid	1.3
	Emulsifier	1.3
<b>(B)</b>	CAPIVA® C 03	22.3
<b>(C)</b>	Flavor (oil soluble)	1.3
	High-intensity sweeteners	0.1

**Properties of Recommended CAPIVA® C 03 Premix**

<b>Product</b>	<b>CAPIVA® C 03</b>
Composition	Mixture of copolymers of vinyl acetate and higher vinyl esters, emulsifiers and auxiliaries
Supply form	15-kg block or 200-kg drum
Recommended use level [% of dry mass]	16–24%
Food allergens & nutritional values	Data available upon request

**Simple Manufacturing Guidelines for Open System**

Homogenize **(A)** and cook to 128–135 °C, stirring continuously, at medium speed. Target moisture content of the final product is 6–7.5%. Add **(B)** and continue stirring (maximum speed) until a homogeneous mixture is achieved. Then add **(C)**, while mixing continuously. Afterwards, the mass can be stored in a preheated vessel at 115–120 °C ready for deposition, which can use starch powder or silicone or plastic molds. The equipment used will determine whether the process parameters, in particular the cooking and depositing temperature, need to be adjusted.

**Adjusting Product Properties**

The standard recipes can be varied according to the desired structure/texture and depending on the flavoring/ingredients used. Initial chew is mainly influenced by the moisture content and bulk sweetener composition. The softness can be adjusted by adding 0.5–1.0% triacetin.

**Equipment Cleaning**

It is advisable to establish and test a cleaning procedure before working with this technology. The use of hot water and, if required, alkaline detergent is recommended. A sieve should be installed to prevent any water-insoluble components from clogging the drainage system. Detailed cleaning recommendations are available upon request.

**Stability of Final Product**

Like other confectionery products, the stability of the final product depends on the exact formulation and ingredients used. Samples based on the guide formulation shown above were stable for several months at room temperature. Even under extreme conditions (40 °C for 4 weeks), the products remained dimensionally stable and retained their sensory acceptability.

**At a Glance: CAPIVA® C 03 for Chewing Gum Depositing**

- Makes chewing gum with more individual shapes
- Simple implementation through ready-to-use CAPIVA® C 03 premix
- Depositing suitable for starch powder or silicone or plastic molds
- Manufacturing based on standard candy-cooking process
- Compatible with conventional candy processes and equipment, such as mogul lines
- Existing regulations for chewing gum and gum base apply



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