



**X** **VELCORIN<sup>®</sup>**  
Gentle on flavour, tough on germs.

**Microbial  
control agent for  
beverages.**

**LANXESS**  
Energizing Chemistry



## **Consistent dedication to true flavor.**

The future is clear: consumers are now expecting great tasting beverages with an ever increasing range of flavors. With VELCORIN® Technology, you can join the growing team of successful manufacturers, who understand and deliver great taste without compromising the microbiological stability of the beverage.

As a manufacturer in the beverage industry, you are constantly faced with ever-increasing challenges. On one hand, you must continuously develop new variations of beverages (e.g. with additional nutritional benefits), while, on the other hand, you must also address the challenge of fulfilling beverage production standards and the protection of your products against spoilage.

Microorganisms, such as yeasts, molds and bacteria may spoil your beverages, or worse render them unfit for consumption.

With our VELCORIN® product, you are able to achieve a stable beverage while retaining its true flavor and sensory profile. Even at low levels, VELCORIN® (Dimethyldicarbonate/DMDC) is extremely effective against typical beverage-spoilage microorganisms and is simple to use.

## Effective protection.

Microorganisms are present throughout the beverage filling process: in the air, in the equipment, in the caps, seals and in the beverages themselves. As a manufacturer, you can choose between a range of different methods to stabilize your beverages – VELCORIN® a microbial control agent is already successfully established as one of the leading technologies in this field.

### **Your benefits from VELCORIN® Technology:**

- uncompromising quality combined with extreme efficacy
- no effect on the taste of the beverage
- breaks down into natural constituents
- cost-effective
- compatible with all types of packaging
- Halal & Kosher certified, OU certified (USA)
- comprehensive application-relevant advisory service

### **VELCORIN® Technology – a wide range of uses**

Carbonated or non-carbonated  
juice beverages



Isotonic sports beverages



Iced teas



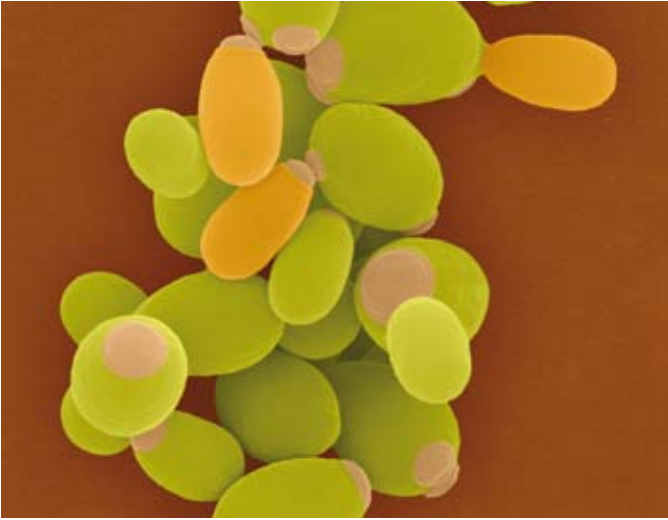
Flavored water



Wines

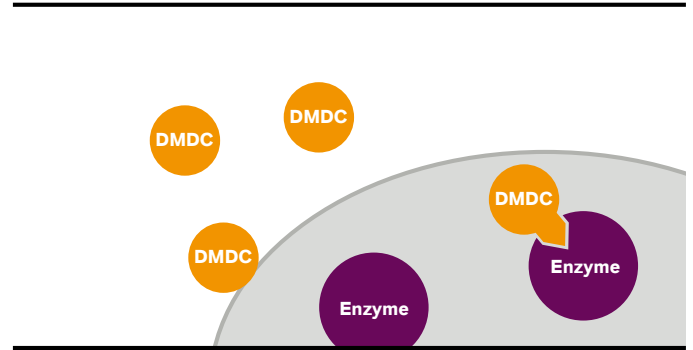


## Uncompromising against microorganisms.



VELCORIN® a microbial control agent is added immediately before filling the beverage. Even at low concentrations, VELCORIN® product is effective against typical spoilage microorganisms such as yeasts and a wide range of bacteria and molds.

### A simplified illustration of how DMDC works

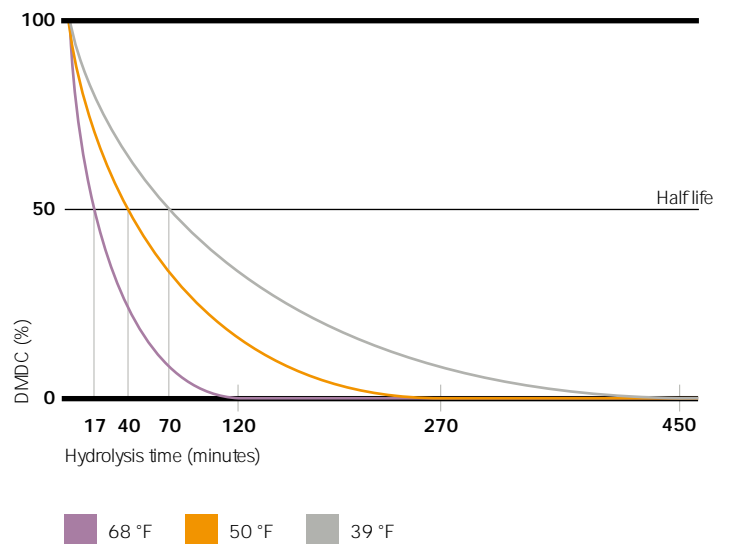


DMDC penetrates the cell and deactivates enzymes, leading to the destruction of the microorganisms.



After addition to the beverage, DMDC rapidly breaks down into negligible amounts of methanol and carbon dioxide, which are naturally occurring compounds in many beverages such as fruit and vegetable juices and wines. Consequently, it has no effects on the taste, aroma or color of the beverage.

### Break down (hydrolysis) of DMDC® in beverages



### Hydrolysis time (minutes)

Filling temperature	Half life	Total hydrolysis time
68°	17	120
50°	40	270
39°	70	450



## In use around the world.

The use of VELCORIN® (Dimethyldicarbonate/DMDC) is approved for a wide range of beverages around the world. Beverage manufacturers are responsible for ensuring that they meet all relevant legal requirements, including compliance for import/export activities. Prominent bodies, such as the EU Scientific Committee on Food, the FDA in the United States and the JECFA of the WHO, have all confirmed the use of Dimethyldicarbonate in the food industry. The production of DMDC is certified according to ISO 9001:2000 and ISO 14001:2005.

## Dosing technology.

With our VELCORIN® product, we offer not only an extremely effective solution to stabilize your beverages, but also, in combination with state-of-the-art VELCORIN® DT Dosing Systems, a truly complete range of services.

### **VELCORIN® DT – your benefits at a glance:**

- easy and quick integration into existing filling systems
- low initial investment
- simple and safe handling
- versatile utilization of existing filling lines

## Always at hand.

You, too, can benefit from a reliable and competent partner – LANXESS. Wherever you are and whenever you need us, our specialists are always at hand to provide detailed advice and comprehensive support for everything relevant to the use of VELCORIN® (Dimethyldicarbonate/DMDC) including:

- advice on product use
- support in laboratory and production testing
- employee training
- comprehensive registration management

What can we do for you? We look forward to each new challenge – and our next meeting with you!

# Velcorin®

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**LANXESS**



