

QUALITY PROTECTS.



Velcorin® technology is a cold sterilization agent that provides protection against microorganisms that could spoil the drink and also maintains the natural flavour.

X Velcorin®

QUALITY WORKS.

LANXESS
Energizing Chemistry

YOUR CHALLENGES **OUR TECHNOLOGY** **MADE IN GERMANY**

As a manufacturer in the beverage industry, you are faced with increasingly tough challenges. On the one hand, new types of drinks (e.g., with added health benefits) always have to be developed, while still maintaining high production standards and ensuring that drinks are protected from spoiling.

Microorganisms that can spoil drinks, such as yeasts, moulds and bacteria do not just affect the quality and particularly the organoleptic characteristics of the drink, but can in certain circumstances endanger the health of consumers.

Microorganisms are everywhere when bottling beverages – in the ambient air, production plants, caps and the drinks themselves. As the manufacturer, you can choose between a variety of different methods to stabilise your drinks, whereby cold sterilisation with Velcorin® has prevailed and successfully established itself as one of the top technologies.

CONVINCING PROTECTION **REAL FLAVOUR**

Velcorin® (dimethyldicarbonate/DMDC) is already highly effective at a low dosage against typical microorganisms that can spoil drinks and safeguards the quality of the beverages without impact on the taste and the color.

Your benefits from Velcorin®:

- Highly effective against microorganisms
- Neutral flavour
- Cost-effective
- Compatible with all types of packaging
- Application-specific advice and services

BROAD RANGE OF **APPLICATIONS**

- **Carbonated & still juice drinks**
- **Isotonic sports beverages**
- **Iced teas**
- **Flavoured water**
- **Wine, Cider, Fruit wine and their non-alcoholic versions**
- **Non-alcoholic and alcoholic Beermix drinks**
- **Product innovations like „Hard Seltzer“ or non-alcoholic spirits**



UNCOMPROMISING AGAINST MICROORGANISMS

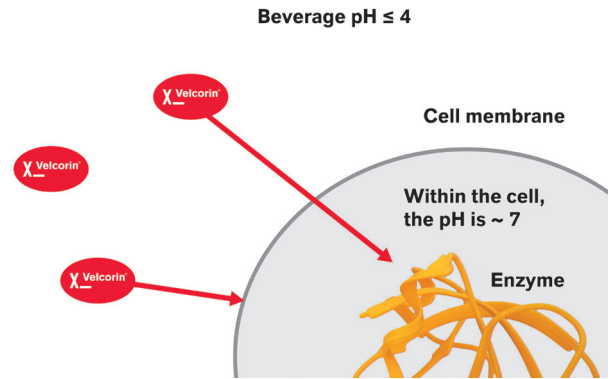
Velcorin® is added during the production of the beverage. Even at low concentrations, Velcorin® is very effective against typical microorganisms such as yeast, bacteria and moulds.

How does Velcorin® work?

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

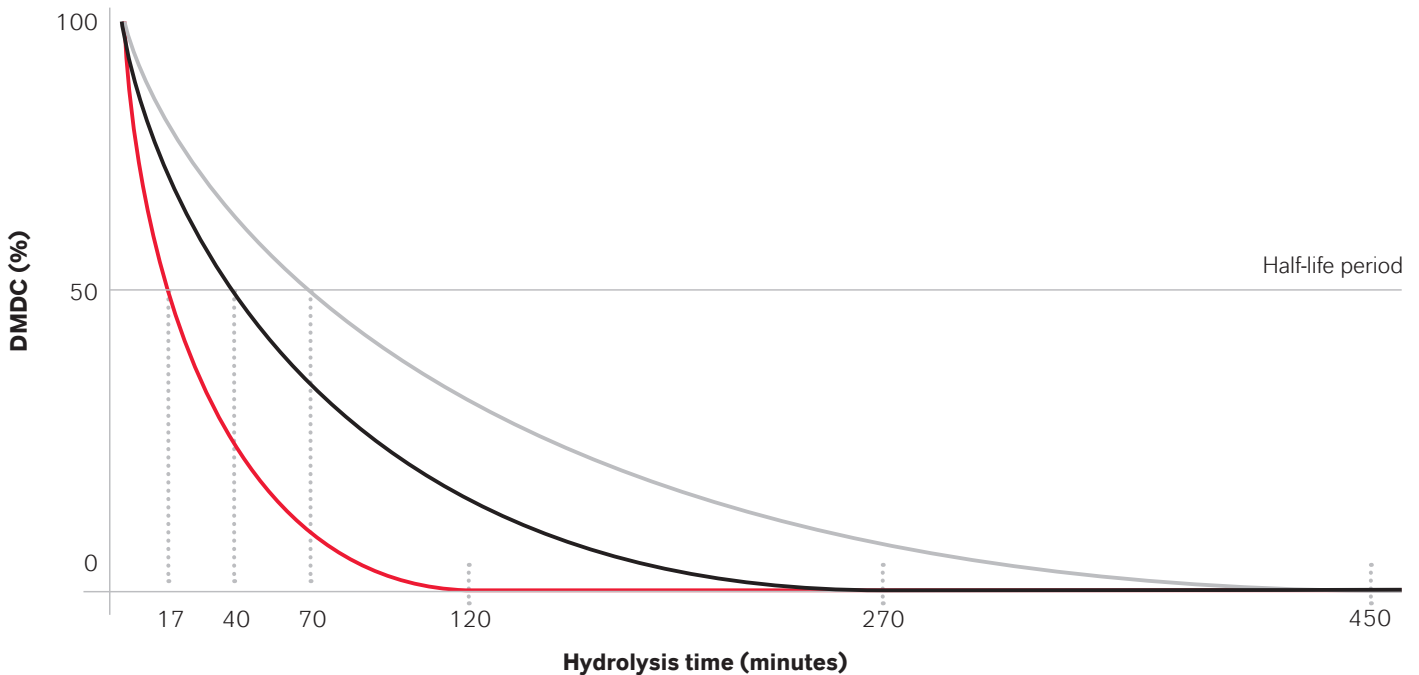
Once added to the beverage, Velcorin® rapidly breaks down into negligible amounts of methanol and carbon dioxide, naturally occurring compounds in many beverages such as fruit and vegetable juices and wines. Consequently, it has no effect on the taste, smell or colour of the beverage.

A simplified illustration of how DMDC works



What is Velcorin®?	
Composition	Dimethyldicarbonate (DMDC)
DMDC	at least 99,8%

Breakdown (hydrolysis) of Velcorin® in beverages

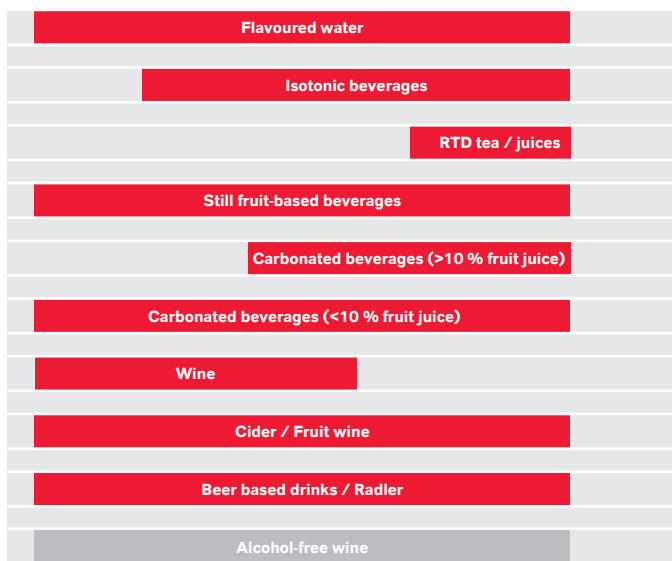


■ 20 °C
 ■ 10 °C
 ■ 4 °C

VELCORIN® – HAS A VALUABLE IMPACT

It is clear, that consumers are always on the look out for new and authentic flavours. It is easy to see why you can fully rely on Velcorin® during the filling process, if you place particular importance on the product quality and authentic taste of your soft drinks.

Standard dosing



10 12 14 16 18 20 ml/100 L
125 150 175 200 225 250 mg/L

Exposure data on microorganisms

Minimum lethal concentrations of Velcorin®; populations of up to 500 cfu/ml

Velcorin® mg/l	
Yeasts	
<i>Candida krusei</i>	100-200
<i>Hansenula pichia</i>	25-50
<i>Kloeckera apiculata</i>	25-50
<i>Rhodotorula rubra</i>	50-200
<i>Saccharomyces cerevisiae</i>	25-100
<i>Saccharomyces diastaticus</i>	50-200
<i>Saccharomyces globosus</i>	25-50
<i>Zygosaccharomyces bailii</i>	50-150
Moulds	
<i>Aureobasidium pullulans</i>	150-250
<i>Byssoschlamys fulva</i>	100-150
<i>Penicillium glaucum</i>	150-200
Bacteria	
<i>Acetobacter pasteurianus</i>	50-100
<i>Lactobacillus brevis</i>	150-200

USED AROUND THE WORLD

The use of Velcorin® is approved for a wide range of different beverages around the world. Beverage manufacturers are responsible for ensuring that they meet all local 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 that dimethyldicarbonate is safe for use in the beverage industry. The production of Velcorin® is certified according to ISO 9001:2015, ISO 14001:2015, ISO 22000:2005 and FSSC 22000 V5.1. Velcorin® is also certified to meet Halal & Kosher requirements.

For further information and questions regarding registration, feel free to contact us at www.velcorin.com



VELCORIN® DT MOTION – DOSING TECHNOLOGY

With Velcorin® we offer not only a highly effective technology for the cold sterilization of your beverage, but in combination with excellent Velcorin® dosing equipment a truly complete solution. The new Velcorin® DT Motion model is based on the reliable mechanical design of the Velcorin® DT Touch series with several new features like upgraded software and user interfaces for full industry 4.0 readiness as well as higher automation for safe and convenient operation.

Key features of Velcorin® DT Motion:

- Extremely precise and reliable dosage of Velcorin® due to excellent dispersion in the beverage flow
- Full control and visualization of the dosing process via WebVisu
- Easy integration into new or existing beverage production lines (including electronic control system of the production line)
- Fulfilling newest technical and food safety certification standards

Highlights of the Velcorin® DT Motion:

- Industry 4.0 ready via IoT gateway for data storage/software updates
- Automatic display of messages, warnings and maintenance intervals
- Intuitive operation thanks to the new touch panel, user menu and remote access (LAN)
- Online process monitoring including all relevant parameters and alarms
- Plug & Play (only power supply required)
- Automatic readjustment of the dosage according to the actual consumption
- Time-saving start-up and bleeding control





The Velcorin® dosing pump is installed in new or existing filling lines. Only minor modifications to the filling line are required for this purpose.

Sizes

Model range	Min. beverage flow rate l/h	Max. beverage flow rate l/h	Max. Metering rate* ml/hl	Connections in DN
DT 3 Motion	600	3.600	20	40
DT 6 Motion	1.200	7.200	20	40
DT 13 Motion	2.400	14.400	20	50
DT 18 Motion	3.600	21.600	20	50
DT 30 Motion	6.000	36.000	20	50
DT 50 Motion	8.400	50.400	20	80
DT 75 Motion	13.200	79.200	20	80

*Maximum permissible dosing rate depends on the product and country registration.



ALWAYS ON HAND

Comprehensive services and benefits for our customers

Technical Services

On-site support by our technical experts

- Technical advise and analysis
- Evaluation of the production and filling process
- Support of lab and industrial trials
- Training of product handling of Velcorin®

Lab Services

Fully equipped beverage laboratory with various analytical capabilities

Microbiology laboratory

- Isolation and identification of beverage spoiling micro-organisms as well as hygiene-critical indicator germs
- Efficacy tests
- Support of hygienic monitoring

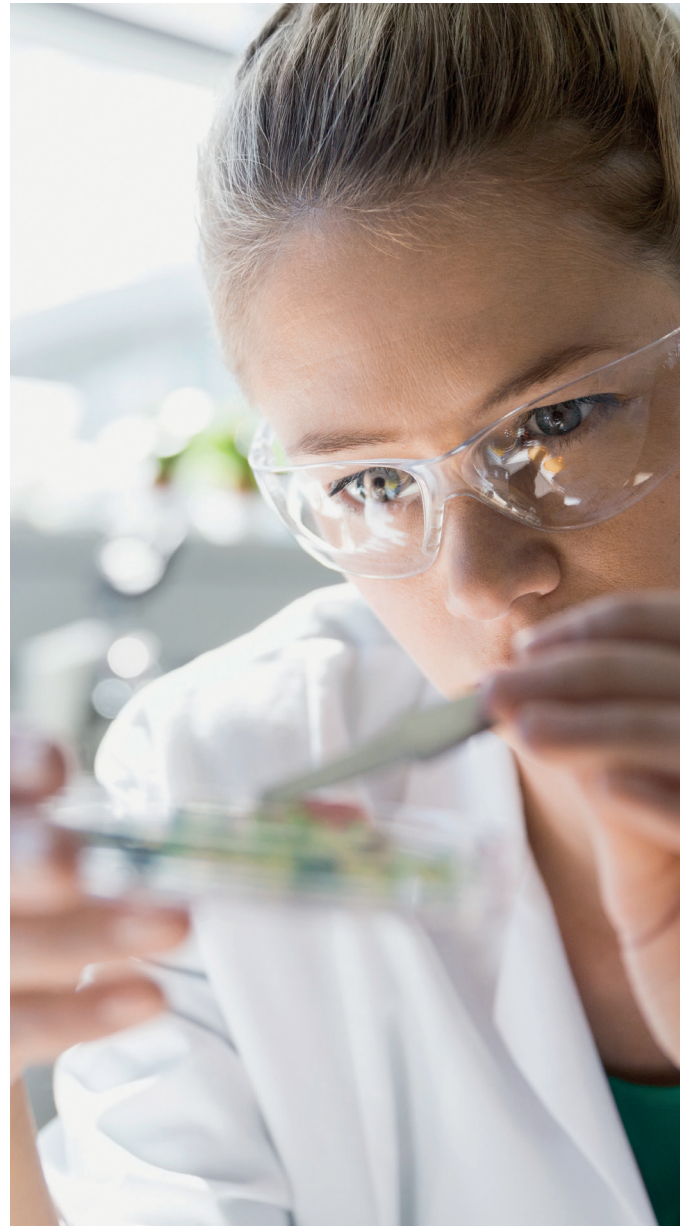
Analytical laboratory

- Determination of Velcorin® dosage
- Chemical-technical analysis of beverages
- Excellent collaboration with other laboratories and institutions for processing special analytical requests

Velcorin® Dosing Technology

Certified state of the art technology – Made in Germany

- Commissioning of the dosing unit
- User training
- Worldwide technical service
- 24/7 service hotline
- Loan units on request



What can we do for you?

We look forward to each new challenge – and our next conversation with you!

www.velcorin.com



LANXESS Deutschland GmbH

Business Unit
Material Protection Products
50569 Cologne | Germany

www.lanxess.com

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