

# QUALITY PROTECTS.

Velcorin® technology is an oenological practice that protects wine against microorganisms and preserves its natural flavour.

**X** Velcorin®

**QUALITY WORKS.**

**LANXESS**  
Energizing Chemistry

## **VELCORIN® – AN EXCELLENT CHOICE FOR YOUR WINE**

Drinking wine encompasses the smell, taste and experience. In brief, wine offers pure enjoyment.

The high expectations of consumers mean that oenologists are always facing new challenges regarding the quality of wine. A key factor is the microbiological stability of the product. The re-fermentation of wines is a particular problem for oenologists, as microorganisms are everywhere during the production, storage and filling of the wine. Microorganisms that can spoil products, such as yeasts, moulds and bacteria do not just affect the quality and particularly the organoleptic characteristics of the wine, but can in certain circumstances pose a health risk to consumers. Global trade, long transport times as well as different types of packaging are some of the other stresses that wine is exposed to. Trends to develop new products with a lower alcohol content and additional flavours or fruit juices are leading to new challenges.

Nowadays, the microbiological stability of wines is predominantly achieved by using SO<sub>2</sub>, filtration, the pH value of the wine and the natural alcoholic content. Velcorin® (dimethyldicarbonate/DMDC) provides an additional, effective oenological practice where we can offer the required protection for all alcoholic beverages for which DMDC has been approved.

## **VELCORIN® – VERSATILE APPLICATIONS FOR OENOLOGISTS**

**The most important Velcorin® applications include:**

- **Quality assurance thanks to protection against refermentation**
- **Optimisation of filtration Optimisation of SO<sub>2</sub>**
- **Excellently effective against typical wine spoilage yeast organisms e.g. Brettanomyces**
- **Microbial stabilisation in bulk wine applications Targeted fermentation stop**
- **Alternative to hot filling process and tunnel pasteurisation**
- **Replacement for potassium sorbate**



# UNCOMPROMISING AGAINST MICROORGANISMS

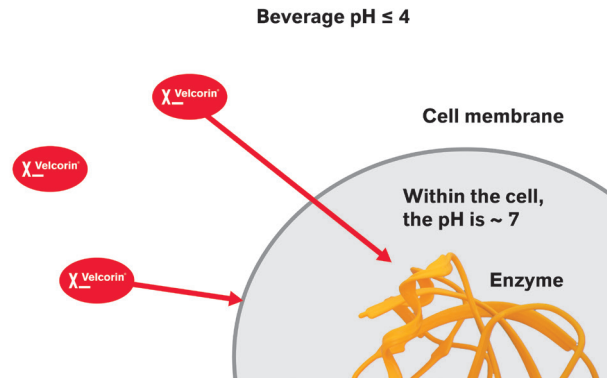
Velcorin® is added during the production of the beverage. Even at low concentrations, Velcorin® is very effective against typical microorganisms such as yeast, bacteria and moulds.

## How does Velcorin® work?

Velcorin® penetrates the cell and deactivates enzymes, causing the microorganisms to die.

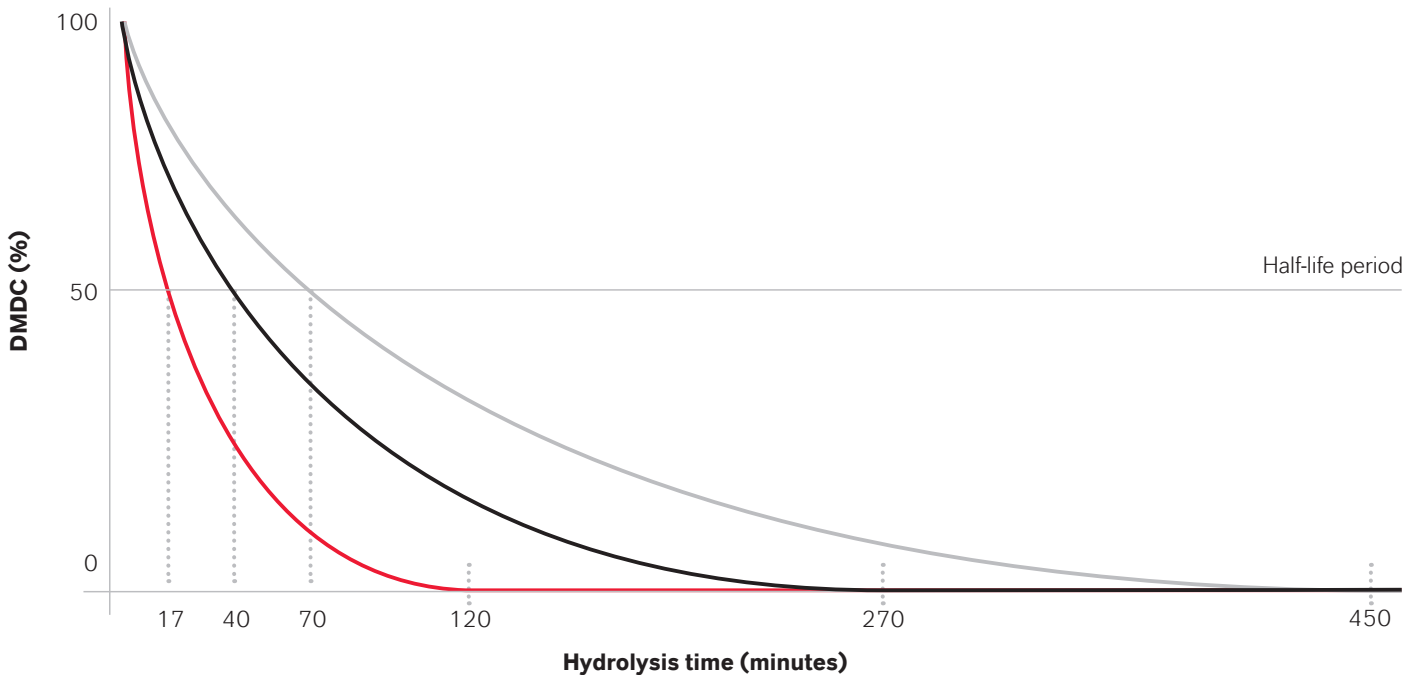
Once added to the wine, Velcorin® rapidly breaks down into negligible amounts of methanol and carbon dioxide, naturally occurring compounds in wine. Consequently, it has no effect on the taste, smell or colour of the beverage.

## 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® – RANGE OF APPLICATIONS

- Wine (white, rosé, red)
- Alcohol-free and low-alcohol wine
- Fruit wines
- Mixed wine beverages
- Apple and pear cider
- Alcoholic mixed beverages
- Alcohol-free soft drinks
- Beer based drinks / Radler

The standard dose of Velcorin® in alcohol-free drinks is 125 mg/l, whereby the max. dose for wine is 200 mg/l. Depending on the approved status, the dose can be up to 250 mg/l in all of the other approved categories.

### Exposure data on microorganisms

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

|                                 | Velcorin® mg/l |
|---------------------------------|----------------|
| <b>Microorganisms</b>           |                |
| <i>Acetobacter pasteurianus</i> | 80             |
| <i>Botrytis cinerea</i>         | 100            |
| <i>Brettanomyces spp.</i>       | <50            |
| <i>Lactobacillus brevis</i>     | 200            |
| <i>Lactobacillus buchneri</i>   | 30             |
| <i>Saccharomyces bailii</i>     | 120            |
| <i>Saccharomyces cerevisiae</i> | 30             |
| <i>Saccharomyces uvarum</i>     | 20             |

## USED AROUND THE WORLD

Velcorin® is a recognised oenological practice that is used in a variety of applications in countries that produce wine. In 2011, the International Organisation for Vines and Wine (OIV) considerably extended the use of DMDC in wine, thus ensuring that oenologists could widely use Velcorin® in vinification facilities.

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 DMDC is safe for use in beverages. 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.

We are more than happy to offer you expert advice regarding any regulatory matters relating to the use of Velcorin® and will refer back to the renowned advisors in important wine-producing countries.

Feel free to contact us for further questions at [www.velcorin.com](http://www.velcorin.com)



## VELCORIN® – HAS A VALUABLE IMPACT

Even small doses of Velcorin® are already highly effective against typical microorganisms that can spoil products, as well as being cost-effective and simple to use. It can be used for filling into standard packaging such as glass, PET, cases, bag-in-box or pouches, as well as during production, temporary storage or transport in a container. Of course, we also offer you competent application-specific advice and comprehensive services.

# 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 unit is installed in new or existing filling lines, and can be used for tank-to-tank treatment or upstream of the container filling system. 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

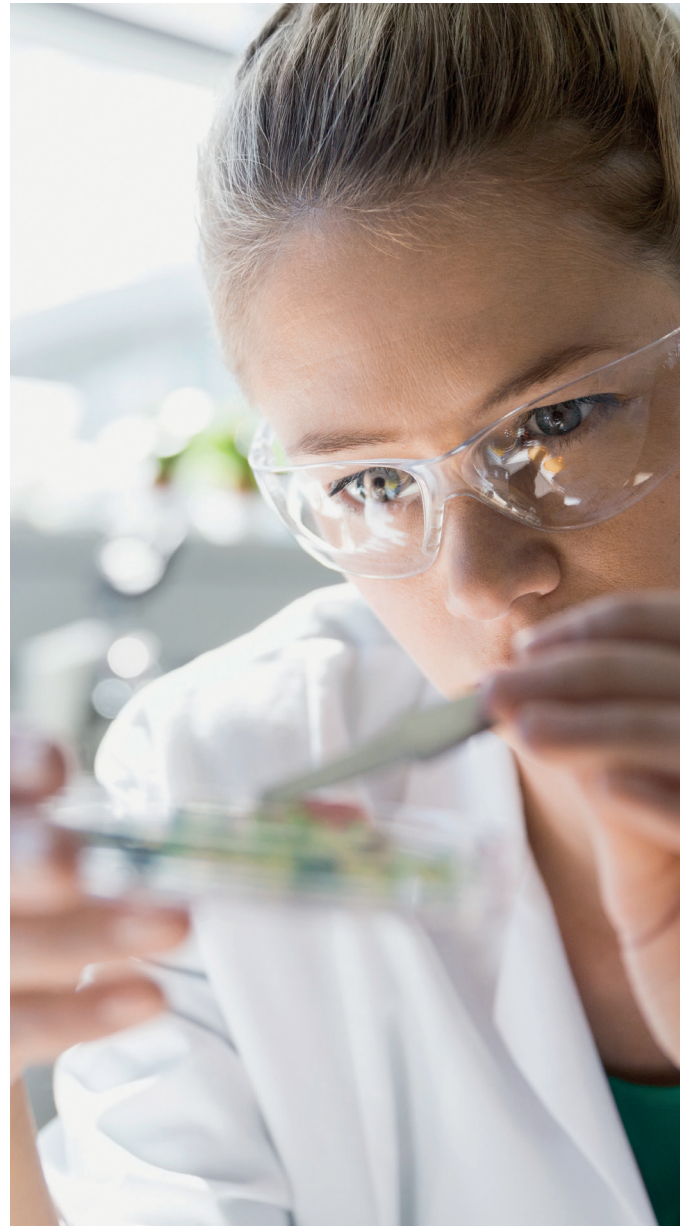
**Analytical laboratory**

- 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](http://www.velcorin.com)



LANXESS Deutschland GmbH

Business Unit  
Material Protection Products  
50569 Cologne | Germany

[www.lanxess.com](http://www.lanxess.com)

This information and our technical advice – whether verbal, in writing or by way of trials – is subject to change without notice and given in good faith but without warranty or guarantee, express or implied, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided - especially that contained in our safety data and technical information sheets - and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery. According to EU regulations, Velcorin® is a hazardous substance. For details please see the material safety data sheet of Velcorin® on [www.velcorin.com](http://www.velcorin.com).

©2022 LANXESS. Velcorin®, LANXESS and the LANXESS Logo are trademarks of LANXESS Deutschland GmbH or its affiliates. All trademarks are registered in many countries in the world.