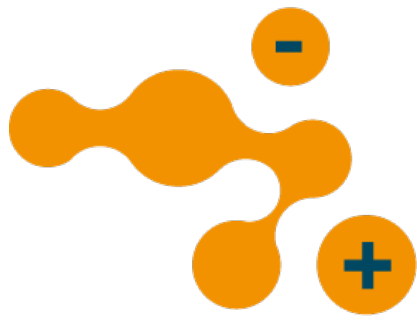




necomiC

Biotechnology

ANTIBACTERIAL

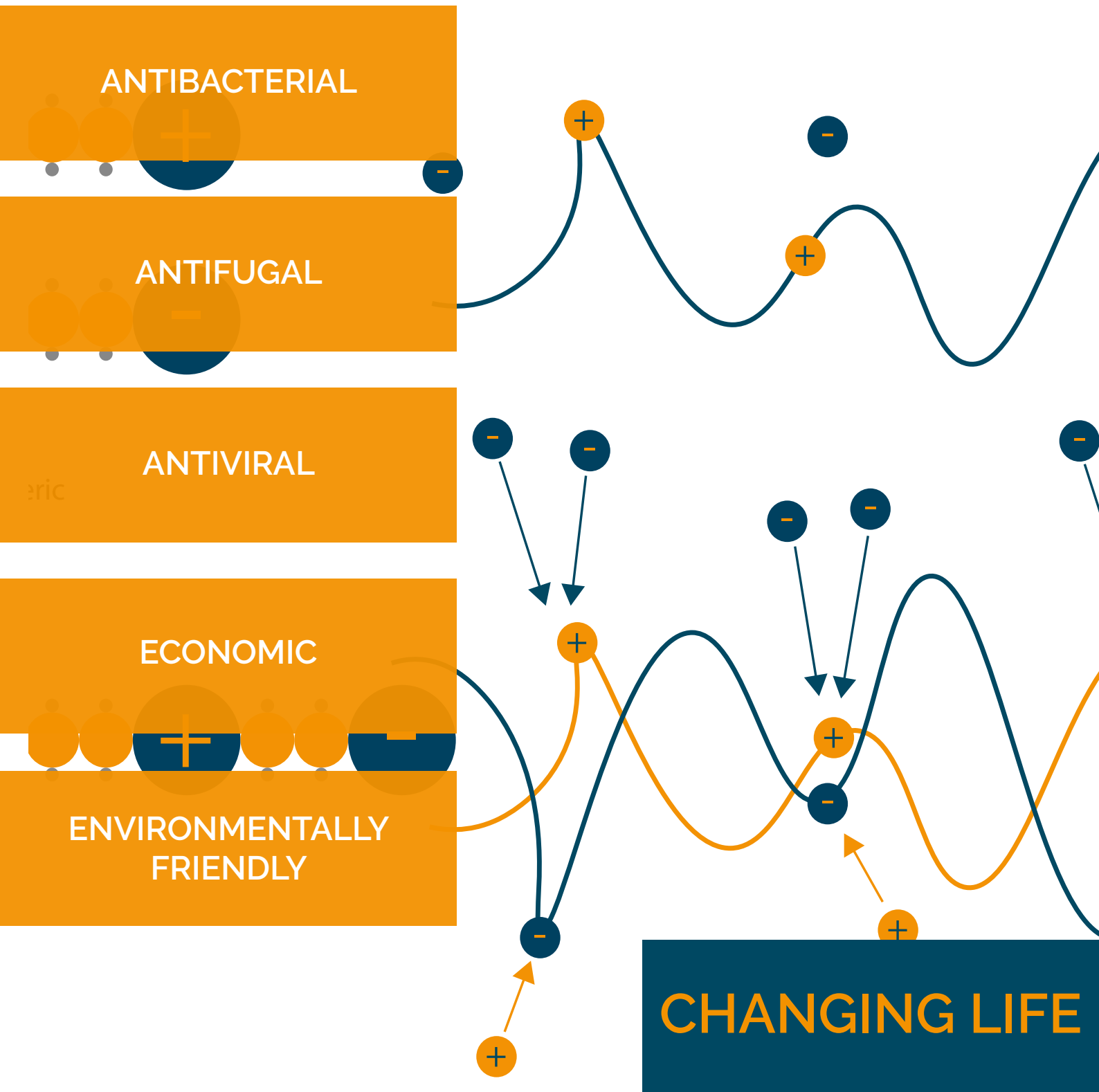
ANTIFUGAL

ANTIVIRAL

ECONOMIC

ENVIRONMENTALLY
FRIENDLY

CHANGING LIFE



” 20 years of experience in research and development enable us to offer a wide range of solutions against multi-resistant bacteria, fungi, spores and viruses.

NECOMIC combines all our know-how in one product, making it versatile and highly effective.“

(Dilek Ucar, Founder)



Biozide effective spectrum against:

- multi-resistant germs
- harmful bacteria, especially mycobacteria
- fungi
- spores
- viruses

Multi-resistant germs have become a widespread and life-threatening problem. Bacteria, fungi, viruses and spores are spreading, especially as a result of globalization and increasing air traffic.

Health problems, some of them irreversible, and even death, are the result.

Microorganisms in everyday life, which can survive for months on surfaces and are mainly transmitted by hands and aerosols, show how important hygiene is.

With **NECOMIC**, all rooms and areas, oberflächen, equipment, ventilation ducts and air conditioning systems can be easily and effortlessly disinfected.

The fogging of **NECOMIC** with its bactericidal, virucidal, fungicidal and sporicidal effect creates a hygienic and healthy air environment and indoor climate, which can break infection chains.

Criteria Disinfectants:

- Effectiveness/degree of disinfection after application
- Activation of the agent and its duration
- Toxicity and health safety
- User and personal safety
- Environmental compatibility
- User-friendliness
- Number of necessary disinfection procedures and their effect
- Cost

The aim of conventional disinfectants is to remove dirt and stains from surfaces and also to eliminate harmful multi-resistant germs, bacteria, mycobacteria, fungi, spores, molds and viruses through established cleaning methods.

In fact, conventional disinfectants have an effective action of 2-3 minutes before harmful microorganisms can reestablish themselves.

This has resulted in e.g.:

- Swine flu, due to the A(H1N1) virus
- Pneumonia, by the Legionella Pneumophila virus,
- Foot and mouth disease, by the microbial enterovirus,
- Urethritis, caused by Eschrica coli bacteria
- COVID-19 by the Corona virus.

In the classic case, alcohols, chlorides, aldehydes, ortho-phthalaldehyde, peracetic acid, hydrogen peroxide, phenol, iodophores or quaternary ammonium compounds are used for disinfection.

In most cases, their use is associated with various risks, so that elaborate protective and preparatory measures have to be taken.

In most cases, either single or a combination of the following risk factors is present:

- skin and respiratory irritation
- allergic reactions
- high toxicity
- staining and corrosion on materials
- film formation on surfaces after application
- damage to electronic equipment

„Our mission is a healthy surrounding for a better life without harming the environment.“

The **NECOMIC** polymer is amphoteric, which means that it has both positive and negative charges.

The lethal effect of **NECOMIC** polymer is based on the destruction of cell membranes by electrostatic interactions.

This disrupts the mechanism of ion exchange within the microorganism and causes it to die.

NECOMIC polymer is not affected by temperature, humidity or UV light.

Neither textiles, metal, glass, plastic nor wood are attacked.

In contrast to other fogging agents and methods, electrical equipment and other sensitive objects do not have to be covered.

NECOMIC does not leave any residues in the form of discoloration, lubricating films, odors or, for example, oxidation.

After application, the **NECOMIC** polymer remains active for at least 7 days, depending on the load. This prevents the settlement, multiplication and colonization of pathogens on the treated surfaces as long as they are not wiped with other disinfectants.

NECOMIC is inexpensive. 1 liter is enough for the fogging of **100m³** of space.

THIS is **NECOMIC**:

- non-toxic, not harmful to health
- non-corrosive, does not leave stains or smear films
- colorless and odorless
- without alcohols, heavy metals, chlorine dioxide, or volatile organic compounds (VOCs)
- environmentally friendly
- specially developed for ULV cold fogging
- highly effective after 5 minutes
- sustainably effective for at least 7 days

The **NECOMIC** amphoteric polymer pulls in microbes due to its cationic preferences, as cell membranes of microbes have a negative charge.

Bacteria need to attract positive charged bivalent cations, like metals as magnesium and calcium, in order to keep the cell structure alive.

When the microbes are drawn in by the **NECOMIC** amphoteric polymer, the anionic preferences comes into action, as the negative charge will destroy the cell membrane of the microbe and herewith causes it's death.

cationic



anionic



The **NECOMIC**-Polymere is created to be amphoteric (both positive and negative charge)

amphoteric



„Comparing to other disinfectants on the market
NECOMIC stays ACTIVE.“

Fogging of **NECOMIC** creates a polymer coating that destroys all harmful microorganisms that cause infections and cross-contamination.

During fogging, **NECOMIC** is converted to dry vapor by ultrasound, allowing homogeneous, three-dimensional distribution.

The resulting droplets of max. 4 microns also reach places that cannot be reached by classic wipe and scrub cleaning.

The polymer coating is active after only 5 minutes and remains in place for at least 7 days.

A sustainable and permanent decontamination of nosocomial pathogens is hereby given and will be achieved with each subsequent

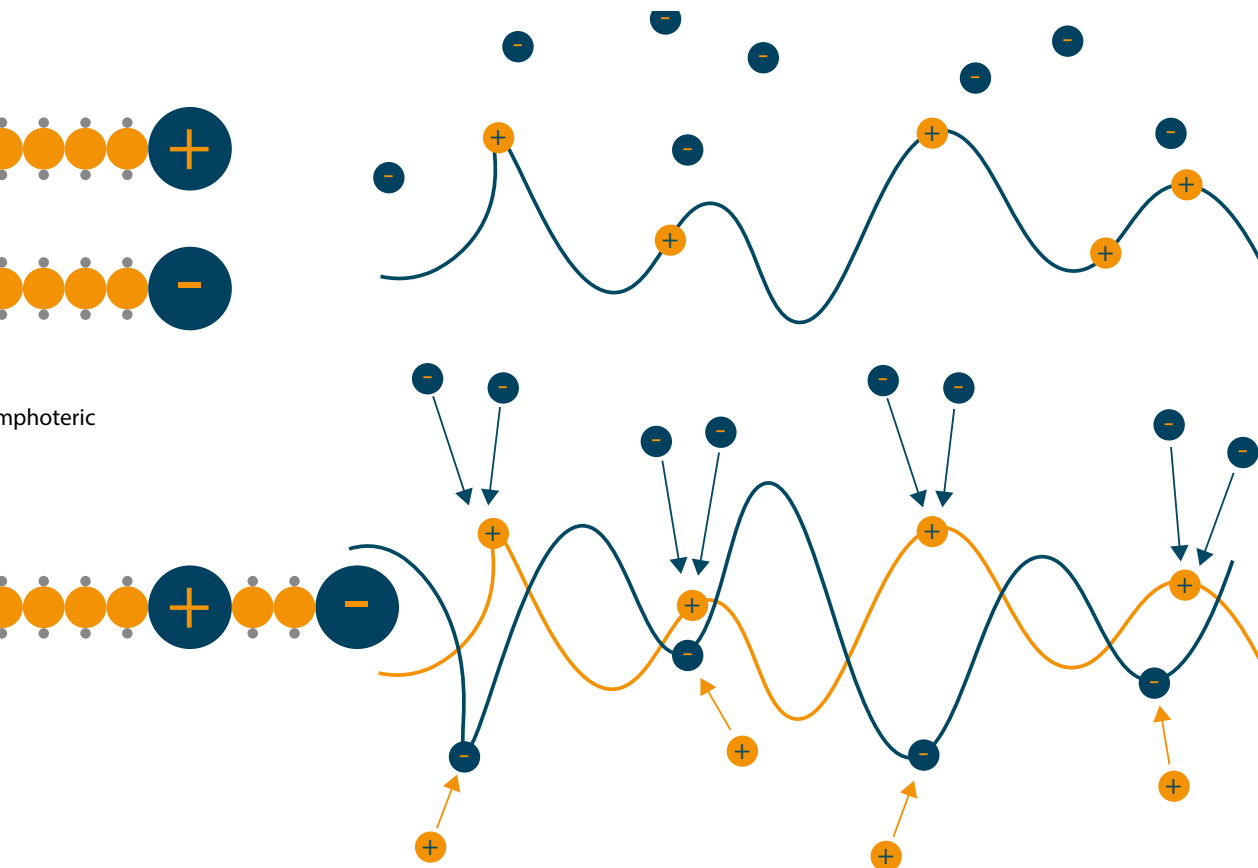
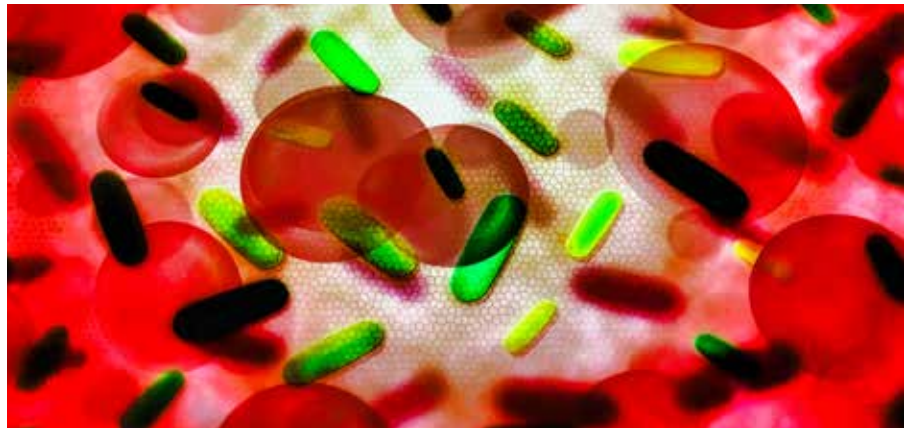
fogging pass.

The **NECOMIC** polymer layer persists in all locations that are not treated by wipe cleaning after treatment with **NECOMIC**.

After wipe cleaning, especially on utility surfaces such as tables, cutlery carts or reception counters, **NECOMIC** is reapplied.

On walls, ceilings, curtains, carpets, furniture and other surfaces that are not subsequently cleaned with disinfectants, the **NECOMIC** polymer layer remains and develops its effect permanently for at least 7 days.

Hereby a large part of the treated room is actively decontaminated and the multiplication of pathogens is minimized.



“ Since 2014 we strive for attention regarding the difference between cleanliness and hygiene.

Due to the globally present problem of the increasing resistance of pathogenic microorganisms to antibiotics and the awareness that the further development of antibiotics has stalled, we still feel the need for solutions to this problem.

Since then, we have been working tirelessly on effective disinfection solutions.

It requires the creation of new methods that make it impossible for pathogenic microorganisms to spread or to build up resistance.

We have embarked on a journey to develop things that create and sustain real hygiene.

We have found solutions that are not only completely harmless to humans, but are also environmentally friendly.

We are proud to present **NECOMIC** as THE result of our years of research in the field of surface disinfection.

NECOMIC combines all the properties that we have set as our goal.

Founder Dilek Ucar and Prof. Metin Turan

have been working together on the project of combating harmful microorganisms for almost 20 years.

Their research and development over the years has not only led to NECOMIC but also to extensive implementations of hygiene measures and concepts



in airports, government buildings, hospitals, ambulances and many other places.

NECOMIC is now patented in more than 100 countries around the world, tested and certified for its efficacy, and approved as a biocide.

With **NECOMIC** we have not only developed an agent for pure disinfection.

We have created a contribution to the solution that goes much further than conventional disinfectants.

NECOMIC is a water-based product, completely colorless and odorless, and virtually PH-neutral.

The properties of the ingredients contained in **NECOMIC** that are hazardous to humans, animals and the environment are neutralized by their combination in the **NECOMIC** polymer.

Since the **NECOMIC** polymer is too large, it cannot interfere with complex organisms and only eliminates harmful microorganisms to make room for the life of positive organisms.

NECOMIC is a milestone in the fight against the increasing resistance of microorganisms.

“

Hygiene must be healthy

*„NECOMIC is the light at the end of the tunnel....
it gives us the air to breathe and the possibility to
embrace each other.“*



M

ulti-resistant pathogens are a challenge for the implementation of hygiene measures.

According to the Federal Ministry of Health, between 400,000 and 600,000 people in Germany alone contract nosocomial infections every year, which are acquired in connection with inpatient treatment.

10,000 to 20,000 people die as a result.

According to the test report of the Hygiene Institute of the Ruhr area dated 24.02.2021, **NECOMIC** was found to have sufficient bactericidal efficacy of greater than 5 log for the test germs *Staphylococcus Aureus*, *Enterococcus hirae* and *Proteus mirabilis* after an exposure time of only 5 minutes.

Furthermore, the levurocidal efficacy of greater than 4 log₁₀ against the test germ *Candida albicans* was proven after 60 minutes of exposure time.

In combination with the highly effective fogging technique, **NECOMIC** can contribute to a significant improvement in the level of hygiene, because it can develop its effect even in places that cannot be reached by conventional cleaning techniques, remains active after the cleaning process and thus prevents new colonization or multiplication of pathogens.

Regular disinfection with **NECOMIC** creates an active hygiene situation that can minimize pathogen-related infections before they need to be treated.

NECOMIC test results:

Results of the Hygiene-Institute des Ruhrgebietes in Germany:

- Bactericidal efficacy of > 5 log₁₀ for:

Staphylococcus Aureus, *Enterococcus hirae* and *Proteus mirabilis*

exposure time 5 minutes

- Levurocidal efficacy of > 4 log₁₀ for:

Candida albicans

Exposure time 60 minutes.

The advantages of using **NECOMIC** are best explained by its use in an ambulance.

The disinfection of an ambulance takes at least 2 hours once a week and is usually carried out by two employees.

The classic wiping and scrubbing technique achieves a disinfection level of max. 60%.

This is time-consuming and cost-intensive, while at the same time the degree of disinfection is poor.

The risk of contamination of patients and paramedics is still too high, especially for patients with open wounds.

Of course, there is consequently also the risk of bringing pathogens from the ambulance into the hospital.

NECOMIC fogging reaches every corner of the interior and gets behind every piece of equipment.

This results in a disinfection level of almost 100%, with significantly reduced staffing levels, as no staff member needs to be present during the disinfection process, which lasts approximately 90 minutes.

Beside the substantially improved disinfection degree, as well as the working time saving the disinfection by fogging is very economical, because it results per procedure only approx. 2.50€ costs.

1 liter of **NECOMIC** is sufficient for 12 disinfection processes.

NECOMIC comparison:

- Nearly 100% disinfection level instead of max. 60%.
- Disinfection process approx. 90 instead of min. 120 minutes.
- Significantly reduced costs due to less manpower and low material costs
- Contamination risk minimized by unnecessary hygiene risks

Rescue vehicle downtimes greatly reduced due to more disinfection processes per time unit

„We have embarked on a journey to develop things that create real and active hygiene.“

Laboratory tested quality

APPLICATION:

NECOMIC is a ready-to-use solution and is specifically designed for use with ULV cold foggers. The recommended minimum quantity is 0.025L/m. After application, efficacy starts ³ from 5 minutes. Fogging efficacy is up to approximately 2 hours, followed by brief shock ventilation.

CATEGORIES PATHOGEN TYPES AND USE:

Type 2 product:

Exposure time 15 minutes, dosage 0.025 L/sq.m.

For public and private rooms, as well as surfaces and equipment: *S.aureus*, *P.aeruginosa*, *E.coli*, *E.hirae*, *B.subtilis*, *C.albicans*, *A.brasiliensis*.

For medical areas, floors, surfaces, devices and equipment: *S.aureus*, *P.aeruginosa*, *E.hirae*, *C.albicansc*, *A.brasiliensis*

• *Type 3 product:*

Reaction time 30 minutes, dosage 0.025 L/sq.m.

Provides antibacterial action in cleaning equipment & sheds such as poultry houses, tank transport equipment & containers and animal shelters for large and small animals: *S.aureus*, *P.aeruginosa*, *P.vulgaris*, *E.hirae*, *C.albicans*, *A.brasiliensis*

• *Type 4 product:*

Reaction time 30 minutes, dosage 0.025 L/sq.m.

Has antibacterial and fungicidal effect in cleaning equipment, vessels and pipelines: *S.aureus*, *P.aeruginosa*, *E. coli*, *E.hirae*.

NECOMIC is registered under Oh Hiyjen DM, BAUA registration number N-90988.

Name and amount of active ingredient (mg / kg):

EC No 269-919-4 Quaternary ammonium compounds.
CAS 68391-01-5 Benvl-C12-18-alkvldimethyl chloride 0.5%.

Additives (mg/kg):

EC No 1272/2008 (CLP)
Polyhexamethylene biguanide hydrochloride, CAS 27083-27-8 with a number average molecular weight (Mn) of 1600 and a polydispersity average index (PDI) of 1.8 (PHMB 1600 1.8) 1.5%.

NECOMIC disinfectant:

For quick surface disinfection NECOMIC disinfectant is available in practical spray bottles.

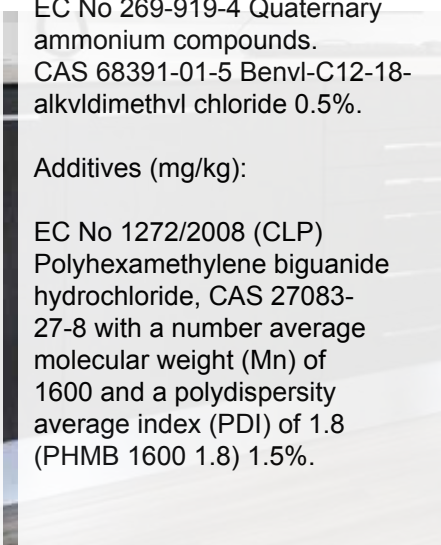
- contents 250ml and 1000ml

or in canisters

- contents 5l and 20l

for filling ULV fogging devices.

For large-scale users NECOMIC is also available as 1000 liter IBC.



The fogging process

APPLICATION:

- The room must be cleaned before fogging.
- Make sure that all windows and doors are closed so that the dry mist can act effectively.
- Pour **NECOMIC** into the fogging device.
- Place the device in the center of the room and turn it on.
- Leave the room.
- During the fogging process, make sure that there are no persons in the room.
- The fogging process of the amount of **NECOMIC** required, depending on the size of the room and the device, takes approx. 25 minutes.
- After this, an exposure time of approx. 2 hours is required.
- After the exposure time, only enter the room using mouth and nose protection.
- Open doors and windows and carry out thorough shock ventilation.
- The room is now three-dimensionally disinfected.
- Useful surfaces that become soiled after fogging and need to be cleaned accordingly are to be resealed by spraying **NECOMIC** can be resealed.

NECOMIC fogging units:

NECOMIC foggers are available in 3 model variants:

- DDF 30 for rooms up to 30 sqm
- DDF 70 for rooms up to 70 sqm
- DDF 100 for rooms up to 100 sqm

All models are characterized by a particularly simple operation. After switching on, the fogger automatically runs through the disinfection process and then switches off automatically.





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