Triquart® MS

Description:

Liquid, light alkaline, QAC-based disinfecting agent for the food and beverage industry

Product strengths:

- excellent disinfecting properties
- light alkaline in application solution
- Marks & Spencer listed
- NTA-free

Properties

Concentrate	**Appearance:**	clear, colourless to light yellow liquid *
	Storage stability:	5 - 40 °C
	Solubility:	at 20 °C miscible with water in any proportion
	Density:	1.08 - 1.12 g/cm³ (at 20 °C) *
	P content:	0.00 %
	N content:	1.35 %
	COD:	365 mg O_2/g
Application solution	**pH:**	10.4 – 11.4 * (1 %, 20 °C, deionized water)
	Foam characteristics:	slightly foaming, not suitable for CIP-systems

* Parameters subject to incoming goods control

Material compatibility: **Triquart MS** is, under the application conditions described below, compatible with

- **Metals** steel, austenitic CrNi steels (quality at least DIN 1.4301 = AISI 304), copper and its alloys (colour change may appear).
- **Plastics** PE, PP, PVC, PVDF (colour change), POM, PTFE
- **Others** glass and ceramic surfaces
- **Sealings** Use of/change to suitable sealings:

Concentrate: FPM (65SH, 0061), EPDM (291, 65SH)

Application solution: FPM (602, 65SH, 0061), EPDM (291, 65SH), NBR

Microbiology

Bactericidal Efficacy at 20 °C and 10 °C						
In accordance to DIN EN 1276 (suspension test)						
Test organism	Contact time [min]	Concentration [%]	Log reduction factor			
			20 °C		10 °C	
			clean conditions (0.03 % BSA)	dirty conditions (0.3 % BSA)	clean conditions (0.03 % BSA)	dirty conditions (0.3 % BSA)
Gram-positive bacteria						
Staphylococcus aureus (DSM 799)	5	0.5 0.75 1.0	>5	>5	>5	>5
Enterococcus hirae (DSM 3320)	5	0.5 0.75 1.0	>5	>5	>5	>5
Gram-negative bacteria						
Escherichia coli (DSM 682)	5	0.5 0.75 1.0	>5	>5	>5	>5
Pseudomonas aeruginosa (DSM 939)	10 5	0.5 0.75 1.0	>5	>5	>5	>5
Listeria monocytogenes (DSM 20600T)	5	0.5 0.75 1.0	>5	>5	>5	>5
Salmonella typhimurium (DSM 5569)	5	0.5 0.75 1.0	>5	>5	>5	>5

Fungicidal Efficacy at 20 °C and 10 °C

In accordance to DIN EN 1650 (suspension test)

Test organism	Contact time in minutes	Concentration in %	Log reduction factor			
			20 °C		10 °C	
			clean conditions (0.03 % BSA)	dirty conditions (0.3 % BSA)	clean conditions (0.03 % BSA)	dirty conditions (0.3 % BSA)
Aspergillus brasiliensis (DSM 1988)	15	3.0	>4	>4		
Candida albicans (DSM 1386)	5 15	0.75 1.0 1.0	>4	>4	 >4 >4	 >4 >4
Saccharomyces cerevisiae (DSM 1333)	5	0.75 1.0	>4	>4	 >4	 >4

Bactericidal and Fungicidal efficacy at 20 °C

In accordance to DIN EN 13697 (surface test)

Test organism	Contact time [min]	Concentration [%]	Log reduction factor			
			20 °C		10 °C	
			clean conditions (0.03 % BSA)	dirty conditions (0.3 % BSA)	clean conditions (0.03 % BSA)	dirty conditions (0.3 % BSA)
Gram-positive bacteria						
Staphylococcus aureus (DSM 799)	5 15	0.75 1.5 1.0	>4	 >4	 >4	 >4
Enterococcus hirae (DSM 3320)	5 15	0.75 1.0 1.0	>4	 >4	 >4	 >4
Gram-negative bacteria						
Escherichia coli (DSM 682)	5 15	0.75 1.0 1.0	>4	 >4	 >4	 >4
Pseudomonas aeruginosa (DSM 939)	5 15	0.75 2.0 1.0 1.5	>4	 >4	 >4	 >4
Yeasts						
Candida albicans (DSM 1386)	15	0.75 1.0	>3	>3	 >3	

Application

Triquart MS is suitable for the disinfection of plants and instruments as well as floors and walls in food processing, dairy and beverage industries.

spray disinfection

Concentration:	0.5 - 2.0 %
Temperature:	ambient temperature
Contact time:	30 minutes

foam disinfection

Concentration:	0.5 – 2.0 %
Temperature:	ambient temperature
Contact time:	30 min

static disinfection

Concentration:	0.2 – 0.5 %
Temperature:	ambient temperature – max 40°C
Contact time:	for several hours possible

Final rinse potable water ensuring that all soil and product residues are completely removed.

Important indications !

- Effluent, containing chemicals, must only be discharged according to the local regulations
- Chemicals containing effluent must only be discharged into the biological treatment station after passing the neutralization- and buffer tank
- When discharging chemically polluted effluent, it is essential to pay specific attention to the bacteria toxicity of this water. This is especially important when dealing with biocide containing effluents and anaerobic sewage plants
- In case of doubt please seek advice from our technical service

Monitoring

Concentration determination

- **Titration**

Receiving flask:	100 ml application solution
Titration solution:	0.1 n HCl
Indicator:	Phenolphthalein

Volume added in ml x 0.228 = (by wt.) % **Triquart MS**

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Application System

For application of **Triquart MS** we recommend using Ecolab's **CHAMELEON HYGIENE SYSTEM**. Chameleon is a range of hygiene chemical application equipment for cleaning open plant.

- All Chameleon systems provide foam, disinfection and rinse functionality
- Stationary and mobile systems providing water pressure between 20 and 40 bar
- Space saving and robust hygienic design
- High operator safety
- Special equipment for e.g. smoke chamber or automated cleaning systems

Our Chameleon brochure is available on request.

Safety

Triquart MS is labelled as "irritant" (symbol "Xi") and ”dangerous for the environment (symbol ”N”).

Use biocides safely. Always read the label and product information before use.

The relevant risk and safety phrases are given in the EC Safety Data Sheet. We recommend our safety concept "P3 - immer auf Nr. Sicher" (P3 - safety first) as an aid to training your employees in how to handle cleaning agents and disinfectants safely. We will be glad to answer any questions you may have in this context.

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ECOLAB®