



Product Information

PREVENTOL[®] RI 80/RI 50



PREVENTOL® RI 80/RI 50

Uses

For the formulation of disinfectants or disinfecting cleaning agents for the medical, veterinary and cosmetic sectors, the food processing industry, agriculture and households. For water treatment (algae prevention in cooling water and swimming pools) and for the elimination of fungi, algae and lichens (substrate pre-treatment agent); for the fungicidal treatment of insulating material based on recycled textiles. Lanxess has not been granted a specific approval for the product under agricultural and pharmaceutical legislation so where the intended fields of application require approval, this must be obtained by the customer himself.

Chemical and physical data

Composition:	solution of alkyl benzyl dimethyl ammonium chloride in dipropylene glycol mono methyl ether RI 80 or in water RI 50
Common name:	benzalkonium chloride
Description:	clear, colourless to pale yellow viscous liquids; cationic

Preventol RI 80

Specification*

Assay:	77.5 - 82.5 %
Alkyl dimethyl amine (free base, M = approx. 221 g/mole):	max. 1.0 %
pH (5 % in water):	7 - 9
Colour Hazen (aq. sol. 50 %):	max. 150

*Specification values are subject to constant monitoring. Only data given in the current edition of the "Specification" are binding.

PREVENTOL® RI 80/RI 50

Characteristic data**

Density (20 °C):	approx. 0.98 g/cm ³
Vapour pressure (50 °C):	approx. 54 mbar
Solidification point:	approx. 6 °C
Boiling point:	approx. 100 °C
Flash point:	> 100 °C (EN ISO 2719)
Ignition temperature:	approx. 345 °C (DIN 51794)
Solubility (20 °C):	miscible in any ratio with water, alkalis, lower alcohols and ketones
Stability range:	pH approx. 1 - 12

**Characteristic data provide further information about the product and are not subject to constant monitoring. They are therefore not binding.

Preventol RI 50

Specification*

Assay:	49 - 51 %
Alkyl dimethyl amine (free base, M = approx. 221 g/mole):	max. 0.3 %
pH (5 % in water):	6.5 - 7.5
Colour Hazen:	max. 100
Free benzyl chloride:	max. 120 ppm

*Specification values are subject to constant monitoring. Only data given in the current edition of the "Specification" are binding.

PREVENTOL® RI 80/RI 50

Characteristic data**

Density (20 °C):	approx. 0.99 g/cm ³
Vapour pressure (50 °C):	approx. 113 mbar
Solidification point:	- 4 °C
Boiling point:	approx. 100 °C
Flash point:	> 100 °C (EN ISO 2719)
Ignition temperature:	approx. 365 °C (DIN 51794)
Solubility (20 °C):	miscible in any ratio with water, alkalis, lower alcohols and ketones
Stability range:	pH approx. 1 - 12

**Characteristic data provide further information about the product and are not subject to constant monitoring. They are therefore not binding.

Storage

If correctly stored and kept in the original sealed package, the products have a shelf life of 1 year. This product is corrosive. We recommend that this product is stored between 30 - 40 °C.

Applications

Preventol RI 80 and RI 50 have a broad spectrum of activity covering mould fungi, algae and lichens along with slime forming organisms, bacteria and yeasts. They are ideal active ingredients for disinfectants for use in households and in the food processing industry. Preventol RI 80 and RI 50 are odourless and are miscible in any ratio with water and lower alcohols. (See also special brochure on Preventol RI 80 / RI 50 for disinfectants).

Diluted solutions of Preventol RI 80 or Preventol RI 50 are therefore ideal for eliminating fungi, algae and lichens from finished coatings, plaster and stone and concrete surfaces. Since Preventol RI 80 and Preventol RI 50 greatly reduce the surface tension of water, good wetting and penetration are guaranteed when using substrate pre-treatment agents based on these products.

A mould-infested substrate must also be pre-treated with a penetrating fungicidal agent (Preventol RI 80 / RI 50) even when the coating applied afterwards is itself fungicidal. To ensure that this coating bonds effectively (no flaking), it is advisable to wash with water after a solution containing Preventol R has been applied or not to apply a coat to the treated surfaces until they have dried (after approx. 24 hours) (pre-tests are recommended).

PREVENTOL® RI 80/RI 50

Spectrum of activity

Minimum inhibitory concentrations (mg/l) of Preventol RI 50

Bacteria (gram positive)

Bacillus cereus (var. mycoides) BB 0053	< 0.01
Bacillus cereus BB 0043	< 0.01
Bacillus subtilis ATCC 6633	< 0.01
Bacillus pumilus BB 0023	0.30
Bacillus anthracis BB 033	< 0.01
Streptococcus faecalis ATCC 8043	< 0.01
Streptococcus epidermidis BB 0813	< 0.01
Streptococcus epidermidis BB 0223	< 0.01
Staphylococcus aureus ATCC 6538P	< 0.01
Micrococcus luteus ATCC 9341	< 0.01

Bacteria (gram negative)

Pseudomonas aeruginosa ATCC 14502	0.60
Pseudomonas maltophilia BB 0103	0.08
Serratia marcescens BB 0123	0.15
Salmonella (group B) BB 0143	< 0.01
Escherichia coli ATCC 11105	0.15
Escherichia coli ISM 68/114	0.30
Proteus vulgaris ATCC 9484	< 0.01
Klebsiella aerogenes BB 0093	0.30
Acinetobacter anitratus BB 0163	0.04



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Mycetes

Candida albicans ATCC 10231	< 0.01
Aspergillus niger	0.08
Saccharomyces carlsbergensis ATCC 9080	< 0.01

Suggested additions

(relative to the ready-to-use dilution)

for disinfection, e.g. in the food processing industry

Preventol RI 80: 0.03 - 0.13 %

Preventol RI 50: 0.04 - 0.20 %

for substrate treatment (in water or alcohols)

Preventol RI 80: 1.0 - 2.0 %

Preventol RI 50: 1.5 - 3.0 %

for algae prevention in cooling water and swimming pools

Preventol RI 80: 2.5 - 12.5 ppm

Preventol RI 50: 4 - 20 ppm

Registration / Approval / Recommendation

EU: EINECS listed

USA: TSCA listed

Canada: DSL listed

Australia: AICS listed

S-Korea: Korean inventory listed

Philippines: PICCS inventory listed

China: Chinese inventory listed

Up-to-date information on the registration status of our products can be obtained from:

LANXESS Deutschland GmbH
Business Unit Material Protection
Regulatory Affairs
51369 Leverkusen / Germany
Fax: (+49 214) 30-7 23 39

PREVENTOL® RI 80/RI 50

Precautions

Preventol RI 80 / RI 50 are clear, viscous liquids. Contact of the skin with the product and the inhalation of vapours should be avoided. The precautions generally recommended for handling chemicals should be observed, e. g. wearing of protective clothing, safety goggles and protective gloves. If the product comes into contact with skin, the affected area should be washed off immediately with plenty of water and soap; splashes in the eyes should be rinsed out immediately with plenty of water. If irritation persists, medical attention should be obtained. Soiled or soaking clothing should be changed at once.

The current safety data sheet should be observed. This contains further information on labelling, transport and storage as well as information on handling, product safety, toxicity and ecology.

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

Toxicity and Labelling

Acute toxicity:	
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	LD ₅₀ oral approx. 398 mg/kg rat

The product Preventol RI 80 is classified as corrosive (C) and dangerous for the environment (N).

Hazard description and R-phrases:

R 22: Harmful if swallowed.

R 34: Causes burns.

R 50: Very toxic to aquatic organisms.

The product Preventol RI 50 is classified as corrosive (C) and dangerous for the environment (N).

Hazard description and R-phrases:

R 22: Harmful if swallowed.

R 34: Causes burns.

R 50: Very toxic to aquatic organisms.

This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, 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 and our advisory service is given in accordance with the current version of our General Conditions of Sale and Delivery.

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