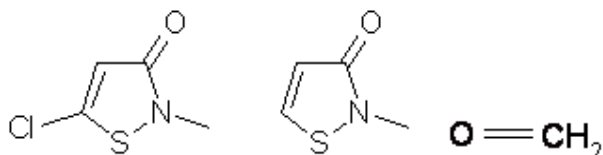


PROXEL™ 106 Antimicrobial

TECHNICAL
INFORMATION BULLETIN



PROXEL 106 Antimicrobial is broad spectrum preservative for the protection of industrial water-based products against spoilage from bacteria, yeasts and fungi. It is a formulation of formaldehyde (HCOH) and a blend of 5-chloro-2-methyl-4-isothiazolin-3-one (CMIT) and 2-methyl-4-isothiazolin-3-one (MIT).

Applications

The product is effective in polymer emulsions, paints, adhesives, and pigment dispersions.

Preservative Properties

This product is effective against a range of problem micro-organisms some of which are listed in Table 1. Please note that Minimum Inhibitory Concentrations (MIC) do not represent effective in-use concentrations which should be discussed with your local Arch representative.

PROXEL 106 Antimicrobial has a non-specific mode of action which means that bacterial resistance is very unlikely to occur. Detailed information on the mode of action is available on request.

Table 1: Minimum Inhibitory Concentrations (MIC)
Micro-organism MIC (ppm)

Bacteria

<i>Alcaligenes faecalis</i> IMI 358536	10
<i>Bacillus subtilis</i> NCTC 10400	25
<i>Burkholderia cepacia</i> NCIMB 13694	25
<i>Enterobacter cloacae</i> CIP 104674	15
<i>Escherichia coli</i> IMI 362054	15
<i>Proteus vulgaris</i> IMI 358534	12
<i>Pseudomonas aeruginosa</i> IMI 358539	25
<i>Pseudomonas putida</i> IMI 358533	25
<i>Pseudomonas stutzeri</i> NCIMB 11359	8
<i>Staphylococcus aureus</i> NCIMB 9518	12

Fungi

<i>Aspergillus niger</i> ATCC 10575	625
<i>Penicillium funiculosum</i> IMI 114933	25

Yeasts

<i>Endomycopsis albicans</i> NCYC 10231	95
<i>Rhodotorula rubra</i> NCTC 9449	50
<i>Saccharomyces cerevisiae</i> NCYC 87	50

(continued on next page)

PROXEL™ 106 Antimicrobial

TECHNICAL
INFORMATION BULLETIN

Table 2: Typical Physical Properties

Composition	An aqueous solution of formaldehyde (HCOH) and a 3:1 blend of 5-chloro-2-methyl-4-isothiazolin-3-one (CMIT) and 2-methyl-4-isothiazolin-3-one (MIT).
Physical form	Aqueous solution
Viscosity at 20°C	6 mPa s
pH at 25°C	2-4
Flash point	56°C
Storage stability	Stable under normal conditions of storage. Avoid freezing. If frozen, allow to thaw and stir well before use.
Compatibility	Incompatible with alkalis and some oxidising and reducing agents, e.g. persalts, sulphites.
Density at 20°C	1.09 to 1.12 g/ml

Amount To Use

The concentration required to adequately preserve your product depends on several factors. These include the susceptibility of the system to microbiological degradation, the extent to which microorganisms can gain access, the species involved, pH, temperature, and length of time for which protection is required.

Results of initial studies indicate that a concentration of **PROXEL 106** Antimicrobial in the range 0.1-0.3% should be sufficient for most applications. Since the effective concentration can be dependent on several factors we recommend that compatibility/stability trials and microbiological challenge testing should be carried out before use.

Technical Service

Arch Biocides technical laboratories can assist with the above tests as part of your customer support programme. Please contact your nearest Arch sales office to take advantage of these customised services.

Risk Assessment & Management

Arch professionals have a wide expertise in the fields of Safety, Health and the Environment. Arch Biocides is committed to and uses this expertise in understanding the suitability of **PROXEL 106** Antimicrobial for specific applications. Please contact your local Arch office should you have questions in this area.

Health And Safety

The **PROXEL 106** Antimicrobial Safety Data Sheet may be supplied upon request. It should be read and understood by all supervisory personnel and employees before using this product. If there is any doubt please contact your local Arch sales office for advice.

Total Quality

Arch Biocides holds a number of ISO 9001 Quality Management registrations covering our product range. The scope of each registration is specific to the location or entity named on the Registration Certificate and our products are supplied to ISO 9001 Standards.

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PROXEL™ 106 Antimicrobial

TECHNICAL
INFORMATION BULLETIN

Regulatory Information

The components of **PROXEL 106** Antimicrobial are in compliance with the following inventories:

EINECS	(Europe)
TSCA	(USA)
AICS	(Australia)
ENCS	(Japan)
DSL	(Canada)
KECL	(Korea)
PICCS	(Philippines)
IECSC	(China)

In many countries all the chemical components of a product must be listed on the relevant “inventory” of chemical substances before it can be supplied. However, listing on an inventory does not necessarily permit all uses of a product and it does not imply compliance with local or regional regulations on biocidal products.

In many countries, use as a preservative against spoilage (i.e. in-can preservation) is subject to additional legislation which often requires a specific product registration.

Enquiries for further information and samples should be addressed to your local sales office.

Some Arch® biocides may not be registered or registered for only certain uses in your country.

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Any data relating to test organisms included in this publication relates to standard laboratory test species and is provided for information only. No claim of controlling organisms in public health applications is made by the inclusion of such data nor should it be implied.

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SAFE HANDLING INFORMATION

Use biocides safely. Always read the label and product information before use. Refer to the Material Safety Data Sheet (MSDS) available from Arch Chemicals, Inc. for information on the safe use, handling and disposal of this product.

Arch Biocides

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