

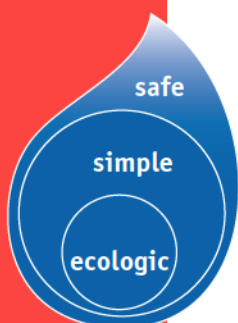
# RDINDUCOAT®

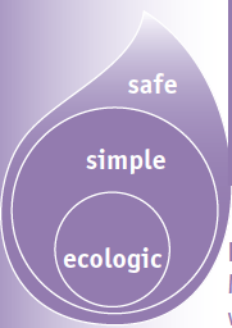
safe, simple & ecological



## The RD Inducoat Hygiene Systems

### Factsheet on algae, mold and bacteria





# For the appropriate RDINDUCOAT application; please consult the **RDINDUCOAT** systems – Purple Line

## MOLD

### Facts on mould

Moulds are microscopic fungi, a group of organisms which also includes mushrooms and yeasts. Fungi are highly adapted to grow and reproduce rapidly, producing spores and mycelia in the process.

In every building, irrespective of its construction, there are mould spores. Given the right conditions, these spores will germinate. The result is a widespread growth, over the full surface. It is not just the disfiguring black mould but also the fine white filaments (mycelium) which are covering far more square meters than a visual inspection would indicate. This contamination needs very little nutrient to expand. They will grow on all types of untreated walls and ceilings regardless of their decorative finish.

### There are two important side effects of a mould contamination:

- the high concentration of (millions) airborne mould spores
- the release of toxins

Traditional approaches to mould prevention have been proven insufficient and/or not effective. An example is the use of 'fast mould killers' using sodiumhypochlorite. Despite the wide availability, their effect is not only limited to e.g. a superficial bleaching effect (of the black mould) but they are also not friendly for the applicators, with the potential danger of releasing dangerous gas like chlorine.

### Which problems do moulds cause?

Depending on the environment, mould can cause severe problems. Within the food & beverage industry, the moulds and their side effects (spores, toxins) can cost money. The cleaning is time consuming and costly – especially because of the fact that the entire contaminated zone has to be treated.

It is therefore that quality assurance systems like BRC-6/Higher level, ISO 22 000, include mould prevention. Moulds also have the potential to cause health problems.

Moulds produce allergens, irritants, and in some cases, potentially toxic substances. Inhaling or touching mould or mould spores may cause allergic reactions in sensitive people. Moulds can affect asthmatic problems with adults with 30-50%\*. Allergic reactions to mould are common.

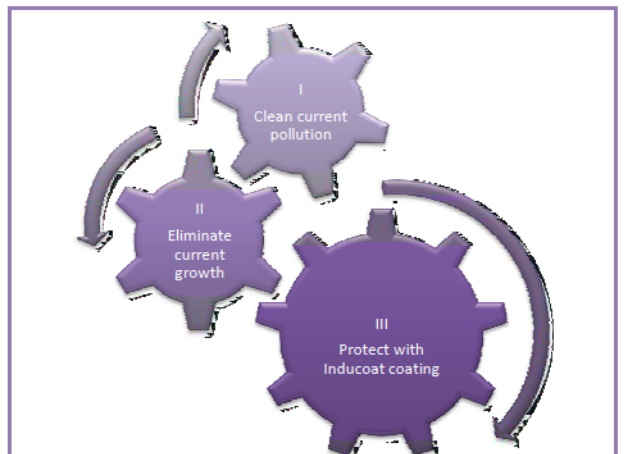
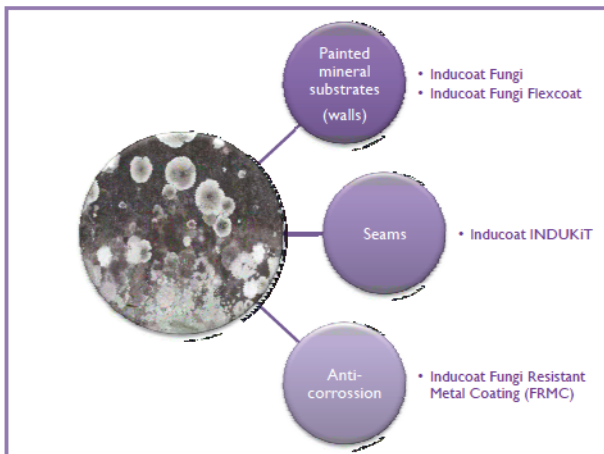
They can be immediate or delayed. 20% of the adult population reacts allergic to mould\*. Moulds can also cause asthma attacks in people with asthma who are allergic to mould. Pregnant women, infants, the elderly and those with health problems, such as respiratory disease or a weakened immune system, are particularly at risk when exposed to mould. Moulds can even increase the mortality\*\*.

\* Facts by Dutch Asthma Fund, 2007

\*\* Based on scientific test results by Dr M. Nolard, Journal of hospital infection, 2004, 149-155

## Clean – prepare - coat

# GREEN, PURPLE & BLUE





# For the appropriate RDINDUCOAT application; please consult the RDINDUCOAT systems – Blue Line

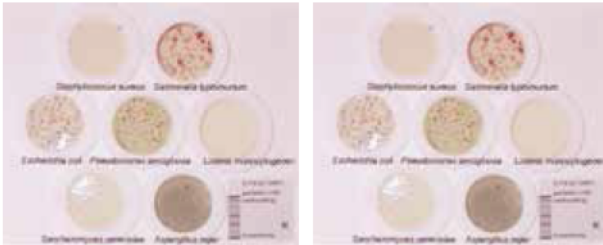
## BACTERIA

### Facts on Bacteria

Bacteria with a size of 0.0001 mm belong to one of the smallest organisms on earth. To view their presence, a microscope is needed. There are several methods to count the number and assess the actual types of bacteria.

Colony-forming unit (CFU) counts offer an estimate of viable bacterial numbers. But this is not enough for a thorough risk assessment. Such an assessment requires to detect gram-negative bacteria like the Enterobacteriaceae.

The Enterobacteriaceae is a large family of Gram-negative bacteria that includes many of the familiar harmful bacteria (pathogens), such as Salmonella, Escherichia coli, Yersinia pestis, Klebsiella and Shigella. Other disease-causing bacteria in this family include Proteus, Enterobacter, Serratia, and Citrobacter.



### Precautionary principle

Most Quality Assurance Managers, Infection Control Specialists and Microbiologists are in consensus that they do not have all the data needed to create an waterproof risk assessment. Most of the time, they measure bacteria according to their internal standards. Key question is: is there need for improvement? To this, there are two responses:

- no need for improvement, keep with the current approach (no extra measures) or
- open for improvement, deploy the precautionary principle (use all options).

With the second group, there is another step to be taken. Do you have time (priority) to look for improvements in this field. Unfortunately, this priority is determined only after major contamination incidents with

food manufacturers (meat, fish, bread) and hospitals. These international contamination incidents which are widely published in the press

- ranging from Salmonella to E.Coli to CA-MRSA to Listeria.

### What is the risk?

First, professionals who are embracing the precautionary principle are accepting that they do not have all the data for a waterproof risk assessment – they accept that there is a risk. It is a matter of fact.

Second, these professionals look beyond the contact areas. They include the horizontal and vertical surfaces, like walls, ceilings, floors, in their assessment. Data has proven that even the walls (vertical) of the Clean Rooms of the NASA (North American Space Agency) have been contaminated by MRSA. It confirms the integral approach.

Third, although having satisfying CFU counts today, the incidents proof that despite thorough hygiene measures there are variables which need to be countered by all preventive measures possible.

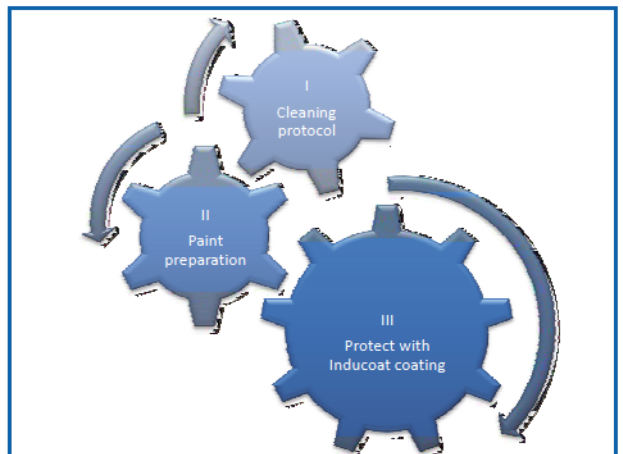
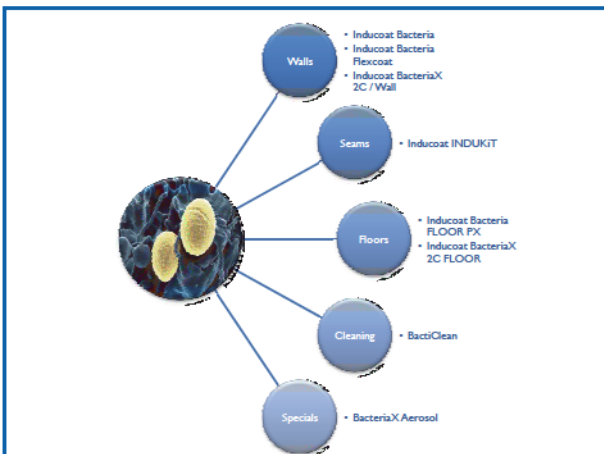
It is dangerous to be complacent, especially with bacteria.

### Is it a priority to use antimicrobial coatings and sealant?

Despite having hygiene as the top priority, not much time is spend on connecting the added value of hygiene coatings and sealant to the current cleaning protocols. It is expected to see a change of approach in this field. There are strong indications that it can save cost and increase quality if this connection between cleaning and coatings is established. And cost saving is certainly a top priority.

Second, Inducoat® clients use a antimicrobial risk assessment and evaluation method (RIE) which determines which environments are critical: high/medium/regular.

Depending on the outcome, the priority levels are set.





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# For the appropriate RDINDUCOAT application; please consult the RDINDUCOAT systems – Green Line

## ALGAE and moss

### Facts on algae and moss

A garden terrace, facade or outside wall with a green tarnish by algae and/or moss is not attractive. The removal costs time and money. And, removal is often harmful for the surface – especially when high pressure water is used.

The cause of the problem are the algae. Algae are a diverse group of plants that occur in a wide range of environments. These plants have typically one-cell and a shallow tack – depending on the type of stone 0.1mm to 1.5mm. Shaded portions of surfaces in humid environments create ideal conditions for algae growth. Nearby ponds and streams also contribute to algae. Black algae streaks discolour and cause a dingy appearance.

The growth of algae is often accompanied by moss and crust moss. Moss is a little bit larger than algae, they have stems and leaves. A crust moss is deceiving – it looks like a plant, but is in fact a combination of a mould and algae.

### What problems do algae cause?

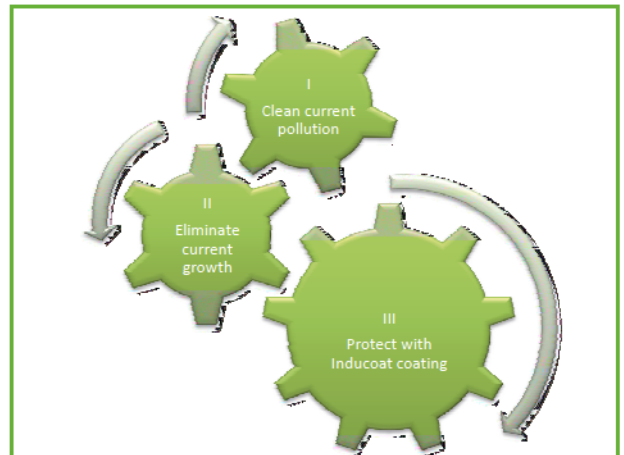
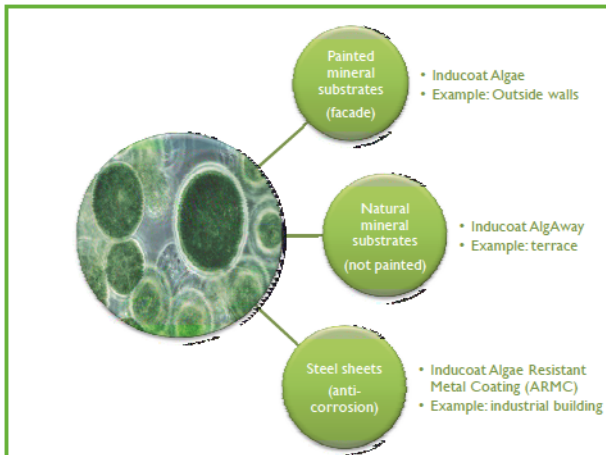
It's green and slippery. Especially the thick layers of moss are harmful to the surface because of the fact that they keep the surface too moist.

But the biggest problem, is the actual cleaning process. If you remove algae with a pressure washer; the surface may be permanently scarred from the high water pressure.

This approach can cause major mechanical damage. And, they reappear within a couple of months. It's a lot of work for only a short term solution. Hence, the object will benefit from long cleaning intervals; the less the better.

This is not only good for the lifecycle of the surface, but also for your budget. The labour intensive process can cost a lot of money. Algae resistant coatings will cut costs.

*An algae covered building will give an impression of inadequate maintenance having a negative impact on the estimated value.*



# RDINDUCOAT®

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