

USER MANUAL

CLEANING AND DISINFECTION OF MOLD WITH HYSAN (MR20) AND BIOX (MR40)

Scan the QR code and read more about HYSAN

Scan the QR code and read more about BIOX

Scan the QR code and read more about PRO-Clean



When should HYSAN and BIOX be used?

HYSAN (MR20)	BIOX (MR40)
Walls, plaster, wallpaper, bare brickwork, etc.	Horizontal concrete surfaces
Beams and boards	
Foundations in basements	
Plywood underlay	

A degassing test has been carried out on HYSAN, showing that the product is indoor climate neutral, and BIOX has been approved by the Danish Veterinary and Food Administration for disinfecting surfaces that come into contact with food (approval no. 2012-29-5409-00321).

PREPARATION: Remove all affected construction waste, insulation, brick/concrete debris, dirt, etc. Ensure thorough cleaning before starting the removal process. Remember that mould removal is the final step in a remediation process. No other tradespeople may be present in the area while the mould remediation is being carried out and until the work has been completed and quality control has been performed.

NB! In the case of deep-seated mould infestation in, for example, plaster walls or wood, it may be necessary to completely remove the affected surface, as the mould has grown into the surface. Otherwise, there is a risk of pulling mould out of the material during cleaning and having to discard the work. If necessary, agree with the responsible consultant/builder on the level of cleanliness to be achieved.

This MUST always be clarified before cleaning begins.

Dilution of HYSAN

CHOICE OF METHOD: For larger cleaning jobs, select a small test area where you can try out the desired cleaning method. For example, select three 20x20 cm areas to be cleaned with HYSAN (diluted according to the table below). Alternatively, perform a test with activated HYSAN (contact PROTOX ApS for further information).

Based on a quality control with PRO-Clean or another method, the most effective dilution is selected. If necessary, consult with the consultant/client before starting the cleaning.

DILUTION OF HYSAN:

Concentrated HYSAN	For particularly stubborn discolouration
1:1 - 1 part HYSAN + 1 part water	For severe infestations
1:2 - 1 part HYSAN + 2 parts water	For moderately severe infestations
1:3 - 1 part HYSAN + 3 parts water	For mild attacks

Activation of HYSAN

ACTIVATION OF HYSAN: Add 35 ml of activator to 5 litres of HYSAN the day before use.

Tools for cleaning with HYSAN

Garden sprayer
Protective gloves
Protective suit
Respirator (see type below)
Stiff/semi-stiff nylon brush or motor scrubber
Cover
Cloths for drying up spills
Ventilation or air purifier

Respirator:

Atomised or activated HYSAN	B2/P2
SBi mould remediation	A2/P3
Mould remediation with atomised or activated HYSAN	A2/B2/P3

Use **PRO-Clean** for quality control if necessary.

Removal of mould with HYSAN

When cleaning mould, it is important to test which concentration of HYSAN works best on the mould-affected surface and material type before starting any major work. Cleaning with HYSAN can be combined with mechanical cleaning as needed, e.g. sanding, ice cleaning, high-pressure cleaning with hot water, etc. The most commonly used method is described below:

1. Vacuum the surface thoroughly with a vacuum cleaner with a HEPA filter (14).
2. A solution of HYSAN and water, e.g. 1 part HYSAN + 1-2 parts water, is mixed in a 5-litre garden sprayer (Gloria, Ginge or similar).
3. The mould-infested surface is treated with the HYSAN solution using a garden sprayer, and the surface is thoroughly scrubbed with a nylon brush until the mould has been removed from the surface. Consumption approx. 1/2 litre per m².
4. Rinse the treated surface with the HYSAN solution from the garden sprayer to remove spores, particles and other dirt from the surface.
5. Leave HYSAN to work for up to 24 hours, which will neutralise any unpleasant odours in the pores and on the materials.
6. After 24 hours, the surface can be wiped with clean water if necessary.
7. If there is a risk of regrowth due to persistent moisture in the substrate, it can be treated with SKIMMEL.

Testing and inspection – before and after mould removal

PRO-Clean: Use PRO-Clean for testing and checking both before and after mould removal.

USE OF PRO-Clean: Remove the cotton swab from the sleeve. Rub the cotton swab repeatedly over an area of approx. 10 x 10 cm. Put the cotton swab back in the sleeve and secure the lid. Break the pipette at the top and press the liquid into the sleeve. Shake gently. The result can be read after a minimum of 5 minutes and a maximum of 10 minutes.

Bestået – ingen skimmelvækst

Opmærksomhed – evt. skimmelvækst

Indikation på skimmelvækst

Indikation på skimmelvækst



If the liquid turns purple, the mould removal has not been thorough enough. NB The liquid slowly changes colour to purple after approx. 30 minutes. [See Appendix 1](#) for further information on methods for self-monitoring and quality control.

LOG BOOK: For larger tasks, a log book must always be kept with essential details about the performance of the task, including checks carried out. This may include details such as dilutions, special conditions, exact locations and times for both self-quality control and external quality control.

Removing unpleasant odours with HYSAN

MIST SPRAYING FOR ODOUR REMOVAL: HYSAN is used in mist spraying to both disinfect and remove unpleasant odours from mould growth, soot damage after fire, bacterial growth, urine, faeces, dead animals/humans, etc. Suitable fogging equipment such as B&G®, Wanjet® or similar is used. The fogger is filled with HYSAN, concentrated or diluted 1:1. The fogging machine is filled with HYSAN, concentrated or diluted 1:1. The room to be treated – this may be a crawl space, a closed cavity, a living space or similar – is filled with HYSAN fog and the room is sealed. After 1-3 days, the room is thoroughly ventilated and the effect is assessed.

See also [ABSCENT](#) for removing residual odours indoors.

Cleaning of ventilation ducts

DISINFECTION: When sprayed, HYSAN is particularly suitable for disinfecting ventilation systems, possibly after prior mechanical cleaning.

Safety information regarding HYSAN

SAFETY: Always read the safety data sheet before use. When fogging, use a full-face mask with a B2/P2 filter. Do not expose to temperatures above 50° C.

PREVENTION: If prevention against future mould growth is required, the product SKIMMEL can be used after treatment.

EXTERNAL CONTROL: External quality control is carried out after approx. 24 hours.

VENTILATION: Ensure good ventilation during treatment and during the drying period.

CORROSION: HYSAN can cause corrosion on certain metals at high concentrations. These surfaces should be protected, especially when spraying.

STORAGE: Store in a dark, cool place. Do not store together with foodstuffs.

APPENDIX

BRIEFLY ABOUT QUALITY CONTROL:

There are various methods of quality control.

Some of the most commonly used methods are described below.

MycoMeter is a chemical test performed with a cotton swab that measures certain chemical components in the mould. When using this test, it is important to rinse the surface thoroughly after treatment, as any dead mould particles remaining on the surface will otherwise affect the test results. If the measurement is higher than approx. 20, the cleaning will often be discarded. When HYSAN is used correctly, it is not normally a problem to achieve a measurement below 20. The test does not reveal which types of mould are present.

PRO-Clean is a method that easily shows the presence of protein on an affected surface. Mould contains proteins, which are substances known to cause allergic reactions in people who are hypersensitive to mould.

Contact impressions are a widely used method for identifying the types of mould present. However, it is necessary to cultivate the impressions in the laboratory, which means a response time of 4-7 days. In indoor environments, surfaces affected by mould should always be cleaned to a level of cleanliness that at least corresponds to that found on surfaces not affected by mould, i.e. low growth – max. 10 colonies on contact prints.

Tape impressions/material samples make it possible to directly observe the presence of mould under a microscope, including whether it has been removed during cleaning.

Regardless of the control methods used, it is important to be very careful when carrying out the work.

Remember - it is not enough just to dry out and/or kill the mould growth. As a rule, it must also be removed, as both dead and living moulds contain the same allergenic substances.

Activation of BIOX

BIOX is **only** used when activated.

ACTIVATION OF BIOX: Add 40 ml of activator to 5 litres of BIOX at least 24 hours before use. The activated BIOX should have turned a lemon yellow colour 24 hours after activation and before use.

Tools for cleaning with BIOX

Broom
Watering can with spray nozzle/boom
Protective gloves
Protective suit
Covering of metals
Powerful fan, Ø=250 or larger
Chlorine dioxide meter (safety equipment)
Respirator with eye protection, preferably air supply:

Atomised or activated Biox	B2/P2
SBi mould remediation	A2/P3
Mould remediation with atomised or activated Biox	A2/B2/P3

Use **PRO-Clean** for quality control if necessary.

Cleaning and disinfection of mould with BIOX

BIOX treatment is carried out by two people. One person applies the product and the other works the BIOX into the surface. Read the sections "Preparation" and "NB!" on page 1 of the manual.

Prepare the ventilation system so that the exhaust air is directed outside. Ensure that unauthorised persons do not come into contact with the exhaust air. Take the wind

direction into account. It is best if, for example, a flexible hose is attached to the fan so that it can be moved around during treatment.

1. Vacuum the surface thoroughly with a vacuum cleaner with a HEPA filter (14).
2. Pour the activated BIOX into a watering can. Slowly pour the BIOX onto the concrete deck at a rate of approx. 0.5-1 litre/m². Use a broom to spread the liquid evenly over the surface with gentle movements. BIOX MUST be kept on the surface for at least 60 seconds. It is important not to scrub with the brush, as this will cause BIOX to lose its effect.
3. Application is carried out continuously by one person while the other person spreads BIOX until the entire surface has been treated.
4. As BIOX is diluted on the surface and you work your way through the room, move the ventilation to remove as much excess BIOX degassing as possible.
5. The treatment takes approx. 1 minute/m² corresponding to 60 m² per hour. After 15-30 minutes, a control measurement is taken with the chlorine dioxide meter at floor level.
6. The respirator must not be removed until the chlorine dioxide levels are below 0.1 ppm.
7. Wipe up any excess liquid on the concrete deck or allow it to evaporate, using a dehumidifier if necessary.

Safety information regarding BIOX

TRAINING: May only be used by trained personnel.

SAFETY: Always read the safety data sheet before use. Do not expose to temperatures above 50°C. When working in basements or below ground level, an external air supply must be used, as chlorine dioxide is heavier than air and may displace oxygen. Employees who are hypersensitive to chlorine should not carry out the treatment.

PREVENTION: If there is a need to prevent future mould growth, subsequent treatment with SKIMMEL is recommended.

CHECK: Quality control is carried out when the surface is dry. PRO-Clean can be used for self-checking, for example. Other control methods can be used as external controls.

VENTILATION: Ensure good ventilation during treatment and during the drying period. Forced ventilation must be established during treatment, see above.

SHELF LIFE: Approx. 3-4 weeks after activation

CORROSION: BLOX can cause corrosion on certain metals. These should therefore be protected during treatment (e.g. cooker hood covers, coat hooks, lamps, electronics and similar).

STORAGE: Must be stored in a dark, cool place in tightly closed original packaging.

Contact



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