

The German Ecolabel
BLUE ANGEL



Thermal Processes for Indoor Pest Control

DE-UZ 57b

Basic Award Criteria
Edition January 2017
Version 4

The Environmental Label is supported by the following four institutions:



Federal Ministry
for the Environment, Climate Action,
Nature Conservation and Nuclear Safety

The Federal Ministry for the Environment is the owner of the label, defines the fundamental guidelines for the award of the Blue Angel ecolabel and appoints the Environmental Label Jury.



The German Environment Agency with its specialist department for "Ecodesign, Eco-Labeling and Environmentally friendly Procurement" acts as the office of the Blue Angel ecolabel. It develops the technical criteria including the required compliance verifications in cooperation with relevant interest groups.



The Environmental Label Jury is the independent, decision-making body for the Blue Angel and includes representatives from environmental and consumer associations, trade unions, industry, the trade, crafts, local authorities, academia, churches, young people and the German federal states.



RAL gGmbH is the awarding body for the environmental label. It examines the applications submitted by companies for the use of the Blue Angel ecolabel and concludes the "Contracts on the Use of the Environmental Label". It also monitors correct use of the ecolabel.

Please use the following format when adding citations:

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Changes compared to the previous versions can be found in Appendix A.

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This document is a translation of a German original. In case of dispute, the original document should be taken as authoritative.

1 Introduction

1.1 Preface

In cooperation with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the German Environmental Agency and considering the results of the expert hearings conducted by RAL gGmbH, the Environmental Label Jury has set up these Basic Criteria for the Award of the Environmental Label. RAL gGmbH has been tasked with awarding the Environmental Label.

Upon application to RAL gGmbH and on the basis of a Contract on the Use of the Environmental Label to be concluded with RAL gGmbH, the permission to use the Environmental Label may be granted to all products, provided that they comply with the requirements as specified hereinafter. The product must comply with all the legal requirements in the country in which it is to be marketed. The applicant shall declare that the product meets this requirement.

1.2 Background

Articulate animals that are parasitic, harmful to health and damaging to stock in indoor spaces can be killed through exposure to heat. Thermal processes are thus an effective alternative to chemical pest control processes and contribute to a reduction in exposure to biocides for people and the environment. In addition, these processes can also kill pests resistant to insecticides and prevent the further development of this resistance.

1.3 Objective of the environmental label

The "Blue Angel for Thermal Processes for Indoor Pest Control should inform those affected that processes issued with this label - in contrast to other processes - provide greater preventative protection for the environment and human health.

Therefore, the environmental label provides pest controllers with a decision-making aid for the control of articulate animals that are parasitic, harmful to health and damaging to stock in indoor spaces if they want to pay particular attention to environmental and health aspects when controlling the specified pests and also make this clear to those affected by them.

It is a voluntary label that is designed to motivate pest controllers to select control methods that pay particular attention to environmental and health aspects. Pest controllers dealing with articulate animals that are parasitic, harmful to health and damaging to stock in indoor spaces can thus utilise the environmental label to convey this aspect of the process in a simple manner.

Therefore, following benefits for the environment and health are stated in the explanatory box:



1.4 Compliance with legal requirements

Compliance with applicable laws and ordinances for the heating devices used for the thermal disinfestation, with which the thermal processes labelled with the environmental label are carried out, is expected as a matter of course.

1.5 Glossary

[1] Biocide: Biocidal products are substances and preparations that serve to deter, make harmless or destroy harmful organisms (pests such as moths, woodworms, mice, etc.) in the non-agricultural sector by chemical or biological means.

[2] Pest: (in this context) Articulate animals that are parasitic, harmful to health and damaging to stock and are found indoors.

2 Scope

These Basic Award Criteria are valid for thermal processes for controlling articulate animals that are parasitic, harmful to health and damaging to stock in indoor spaces.

Also included is the treatment of objects (e.g. furniture and cases) or products (e.g. teas and spices) in facilities suitable for this purpose.

3 Requirements

The thermal processes named under Paragraph 2 can be labelled with the environmental label illustrated on the first page of these Basic Award Criteria if they fulfil the following requirements.

3.1 Preliminary examination of premises

Before the thermal treatment, the affected room must be inspected in the same way as before treatment using biocides.

3.2 Preliminary examination and written information on heat sensitivity of materials

The client must be informed in writing about possible heat damage before the treatment.

3.3 How to remove/ensure heat-sensitive materials

All heat-sensitive objects must be tightly packaged and removed from the affected room before the treatment by the occupant or the user and then treated separately. This includes e.g. pressurised containers (e.g. hair spray and fire extinguishers), flammable liquids (e.g. perfumes), oil paintings, medicines, candles, plants and foodstuffs. Fire detectors must be switched off and opened. Conveyor belts and chains under tension must be loosened. All electrical devices such as televisions, computers or fridges must be disconnected from the electricity supply.

3.4 Testing of fixed-built and non-fixed-built parts

In order to ensure the success of the heat treatment to control articulate animals that are parasitic, harmful to health and damaging to stock in indoor spaces, the furniture in the room

must be opened and hiding places such as skirting boards, power sockets and light switches, cable ducts and wall panels dismantled. If necessary, built-in furniture needs to be dismantled.

3.4.1 Preparation of premises for the hot air process

Objects standing near to or fixed to the wall must be moved away from the wall so that the required temperature can also be reached behind them. Materials providing thermal insulation such as fabrics, bulk materials, woodpiles or bagged goods must be removed. In order to ensure that there is no cooling due to evaporation, open containers filled with liquids must be emptied or removed.

3.5 Sealing of escape routes

In order to ensure that the pests being treated cannot flee into neighbouring rooms, all gaps in windows and doors, as well as in floors and walls such as cable ducts, heating pipes and joints, must be sealed using heat-resistant adhesive tape or if possible with acrylic (or another adequate filler).

3.5.1 Treatment with kieselgur

Difficult to reach gaps and spaces can be treated with kieselgur (diatomaceous earth). Fleeing pests are thus killed in this way.

3.5.2 Avoidance of biocides

Treatment with other biocides is only necessary if there are still unreachable cold areas that could be used by the pests being controlled as a hiding place. It is advantageous if harmful insects are firstly driven from critical areas into spaces that are easier to disinfest using suitable heat application methods.

3.6 Time and minimum temperature specification

In the case of warm-air processes, all areas of the room being treated must reach a minimum temperature of 50°C and a maximum of 60°C for a period of at least 6-12 hours.

In the case of hot-air processes, all areas of the room being treated must reach a minimum temperature of 50°C for a period of at least 6 hours. Furthermore, a maximum temperature of 90 °C should not be exceeded.

Depending on the size and composition of the room, it can take between 24 and 48 hours for this type of thermal disinfestation.

3.6.1 Use of stoves and fans

In order to reach and maintain the required temperature in all nooks and crannies, especially near to the floor where the pests are frequently found, it is necessary, in some circumstances, to use hot-air fans. The number of fans and their orientation is once again dependent on the size and composition of the room.

3.6.2 Planning and logging of the procedure

During the pest control treatment, the room temperature must be constantly measured at various measurement points and saved using data loggers. The location of the measurement points in the room should be selected based on the lifestyle of the insects being controlled and

any awkwardly situated locations should also be taken into account. They should be marked in advance on a room plan. All of the measured data should be made available to the customer as a diagram or a table of data.

3.7 Requirements on security of use

The temperature of the hot air at the discharge opening of the feed pipe is not permitted to exceed 90°C for fire safety reasons. The discharge opening must be kept at a distance of at least 1 meter from highly flammable materials (construction classification B3 according to DIN 4102 Part 1) e.g. paper, cardboard and similar.

3.8 Further regulations to comply

In the case of hot-air processes, occupational safety and accident prevention regulations, as well as any technical safety, occupational medicine and occupational hygiene rules, must be observed.

3.9 Thermal treatment of objects

In the case of the thermal treatment of objects (e.g. furniture and cases) in facilities suitable for these processes, a minimum temperature of 55°C must be achieved for at least 60 minutes. Depending on the size of the facilities, the temperature must also be constantly measured here in at least two locations and documented.

Compliance verification

The applicant declares compliance with the requirements according to Paragraph 3.

4 Applicants and Parties Involved

Supplier of final products according to Paragraph 2 shall be eligible for application.

Parties involved in the award process are:

- RAL gGmbH to award the Blue Angel Environmental Label,
- the federal state being home to the applicant's production site,
- Umweltbundesamt (German Environmental Agency) which after the signing of the contract receives all data and documents submitted in applications for the Blue Angel in order to be able to further develop the Basic Award Criteria.

5 Use of the Environmental Label

The use of the Environmental Label by the applicant is governed by a contract on the use of the Environmental Label concluded with RAL gGmbH.

Within the scope of such contract, the applicant undertakes to comply with the requirements under Paragraph 3 while using the Environmental Label.

Contracts on the Use of the Environmental Label are concluded to fix the terms for the certification of products under Paragraph 2. Such contracts shall run until December 31, 2027. They shall be extended by periods of one year each, unless terminated in writing by March 31, 2027 or March 31 of the respective year of extension.

After the expiry of the contract, the Environmental Label may neither be used for labelling nor for advertising purposes. This regulation shall not affect products being still in the market.

The applicant (manufacturer) shall be entitled to apply to RAL gGmbH for an extension of the right to use the ecolabel on the product entitled to the label if it is to be marketed under another brand/trade name and/or other marketing organisations.

The Contract on the Use of the Environmental Label shall specify:

- Applicant (supplier)
- Brand/trade name, product description
- Distributor (label user), i.e. the above-mentioned marketing organisations.

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Appendix A Version history

The following changes were made to ecolabel DE-UZ 57b "Thermal Processes for Indoor Pest Control, Edition January 2017, Version 1" and required the issuing of an updated version in each case. The version at the time of application is valid. If the changes were required for the implementation of new legal regulations, they apply to all certified products.

Version 2 (03/2018): Editorial changes

Version 3 (01/2021): Prolongation for 4 years without any changes (until 31.12.2025)

Version 4 (01/2025): Prolongation without changes, Expiry date: December 31, 2027