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Underwriters Laboratories Inc.®

Subject 1046

12 Laboratory Drive
Research Triangle Park, NC 27709
August 16, 1993

TO: Fire Council of Underwriters Laboratories Inc.,
Subscribers to UL's Classification Service for Grease
Filters,
and
Others Interested

SUBJECT: Request for Comments on the Proposed Third Edition of the
Standard for Grease Filters, UL 1046; PROPOSED EFFECTIVE
DATE

SUMMARY OF TOPICS

This bulletin proposes the Third Edition of the Standard for
Grease Filters, UL 1046.

COMMENTS DUE ON THIS PROPOSAL: NOVEMBER 15, 1993

* * * * *

Attached for your review and comment are proposed requirements for
UL 1046.

Please note that proposed requirements are of a tentative and early
nature and are for review and comment only. Current requirements
are to be used to judge a product until these requirements are
published in final form.

PROPOSED EFFECTIVE DATE

Since the proposed requirements specified in 3.1, 7.4, and
Structural Integrity Tests, Section 6, will necessitate a review
and retest of currently Classified products, UL proposes that the
new requirements become effective 12 months after publication.
This is intended to provide manufacturers with sufficient time to
submit modified products for investigation and to implement the
necessary changes in production. Please note that this also
includes the time that will be needed by UL to conduct a review of
the modified product.

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Subject 1046

-2-

August 16, 1993

Since the remainder of the requirements will not necessitate a review or additional testing of currently Classified products, UL proposes that these requirements become effective upon publication.

RATIONALE

UL 1046 currently specifies performance requirements for grease filters. The main performance-related objectives are to determine the ability of the filter to:

1. Remove grease from grease-laden air;
2. Adequately drain collected grease so as not to pose a potential fire hazard; and
3. After exposure of the filter to grease-laden air, limit the projection of flames downstream of the filter to a maximum of 18 inches when attacked by flame on the upstream face.

In addition to the above, UL has determined that a grease filter must be constructed to resist warping during normal handling and cleaning, and thereby maintain a square or rectangular shape. A deformed filter will allow passage of grease-laden vapors or flames into the hood or exhaust duct, resulting in an increased risk of fire. Therefore, UL is proposing that the Third Edition of UL 1046 specify Structural Integrity Tests.

UL is also proposing that manufacturers be given the option of having a grease filter tested with either 18 inches or 6 inches between the installed grease filters and the cooking equipment. This proposal is consistent with the exception to ANSI/NFPA 96 — 1991 which allows a minimum of 6 inches between installed grease filters and cooking equipment if the cooking equipment does not have an exposed flame and if the flue gases bypass the filters.

Finally, UL is proposing that square filters be constructed so that they can only be installed in the intended orientation, unless the filters meet the requirements for the Grease Loading and Flame Exposure Tests in all positions. This requirement will increase the likelihood that installed grease filters will perform as tested, and is consistent with ANSI/NFPA 96 — 1991.

Other editorial revisions have also been included to clarify the intent of existing requirements, and to more accurately reflect current practice.

Subject 1046

-3-

August 16, 1993

IMPACT

If the requirements presented in Appendix A are adopted, manufacturers wishing to obtain or maintain Classification will need to submit their products for evaluation in order to determine compliance with the Third Edition of UL 1046. Product redesign may be necessary to achieve compliance with the new requirements specified in 3.1, 7.4, and Structural Integrity Tests, Section 6.

* * * * *

Request for Comments on Proposals

Please provide the following:

1. Your comments concerning the proposed requirements; and
2. Your comments concerning the proposed effective dates, should the proposals be adopted.

Written comments should be sent to the attention of Anthony Caporale at UL's RTP office, 12 Laboratory Drive, Research Triangle Park, NC 27709. Please reference all correspondence to Subject 1046.

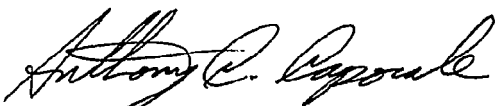
All comments should be sent by November 15, 1993.

Questions regarding interpretation of requirements should be directed to the responsible UL Staff. Please see Appendix B to this Bulletin regarding designated responsibility for the subject product category.

Unless specifically requested to do otherwise, UL will not acknowledge comments indicating concurrence with these proposals.

UNDERWRITERS LABORATORIES INC.

REVIEWED BY:



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Attachments

PNE1046.W03

Subject 1046

-A1-

August 16, 1993

PROPOSED REQUIREMENTS ARE OF A TENTATIVE AND EARLY NATURE AND ARE FOR REVIEW AND COMMENT ONLY. CURRENT REQUIREMENTS ARE TO BE USED TO JUDGE A PRODUCT UNTIL THESE REQUIREMENTS ARE PUBLISHED IN FINAL FORM.
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A P P E N D I X A

PROPOSED REQUIREMENTS AND PROPOSED EFFECTIVE DATES FOR THE
THIRD EDITION OF THE STANDARD FOR
GREASE FILTERS,
UL 1046

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~. Proposed new requirements are identified by (NEW). In the case of extensively revised paragraphs, the original text is identified by (CURRENT) and is followed by the proposed text identified by (PROPOSED). A paragraph that is proposed to be deleted is identified by (DELETED) and is shown ~~lined-out~~.

August 1993

1

UL 1046

Standard for

Grease Filters For Exhaust Ducts

First Edition – December, 1974

Second Edition

Date

An effective date included as a note immediately following certain requirements is one established by Underwriters Laboratories Inc.

Revisions of this standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest published set of revision pages.

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CONTENTS**GENERAL**

1 Scope	5
2 Units of Measurement	5

CONSTRUCTION

3 General	5
-----------------	---

PERFORMANCE

4 Grease Loading Test	6
5 Flame Exposure Test	9
6 Structural Integrity Tests	11
7 Conditions of Acceptance	11

MARKING

8 General	12
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FOREWORD

- A. This Standard contains basic requirements for products covered by Underwriters Laboratories Inc. (UL) under its Follow-Up Service for this category within the limitations given below and in the Scope section of this Standard. These requirements are based upon sound engineering principles, research, records of tests and field experience, and an appreciation of the problems of manufacture, installation, and use derived from consultation with and information obtained from manufacturers, users, inspection authorities, and others having specialized experience. They are subject to revision as further experience and investigation may show is necessary or desirable.
- B. The observance of the requirements of this Standard by a manufacturer is one of the conditions of the continued coverage of the manufacturer's product.
- C. A product which complies with the text of this Standard will not necessarily be judged to comply with the Standard if, when examined and tested, it is found to have other features which impair the level of safety contemplated by these requirements.
- D. A product employing materials or having forms of construction differing from those detailed in the requirements of this Standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be judged to comply with the Standard.
- E. UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. The opinions and findings of UL represent its professional judgment given with due consideration to the necessary limitations of practical operation and state of the art at the time the Standard is processed. UL shall not be responsible to anyone for the use of or reliance upon this Standard by anyone. UL shall not incur any obligation or liability for damages, including consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Standard.
- F. Many tests required by the Standards of UL are inherently hazardous and adequate safeguards for personnel and property shall be employed in conducting such tests.

GENERAL

1 Scope

1.1 Grease filters covered by these requirements are intended for installation and use in accordance with the Standard for Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment, ANSI/NFPA 96 – 1991.

1.2 The test methods described in this Standard pertain to grease filters used primarily in exhaust systems with restaurant-type cooking equipment and intended for the removal of flammable grease droplets in air streams.

1.3 Grease filters are investigated to determine their abilities to:

- a) Remove grease from grease-laden air;
- b) Drain off the collected grease in such a manner that it will not fall back onto the cooking surface; and
- c) Limit the projection of flames downstream when attacked by flame on the upstream face, after exposure to grease-laden air.

2 Units of Measurement

2.1 If a value for measurement as given in these requirements is followed by an equivalent value in other units in parenthesis, the second value may be only approximate. The first stated value is the requirement.

CONSTRUCTION

3 General

(NEW)

3.1 Square filters shall be constructed so that the filters can be installed only in the intended orientation.

Exception: Filters that meet the performance requirements for the Grease Loading and Flame Exposure Tests in all positions need not comply with this requirement.

Paragraph 3.1 effective (12 MONTHS)

3.2 Any part of a grease filter that will come in contact with a user's hands during normal usage shall be free from sharp edges or projections.