

1993 STANDARD for

RESIDENTIAL AIR FILTER EQUIPMENT



AIR-CONDITIONING &
REFRIGERATION
INSTITUTE

Standard 680



IMPORTANT

SAFETY RECOMMENDATIONS

It is strongly recommended that the product be designed, constructed, assembled and installed in accordance with nationally recognized safety requirements, appropriate for products covered by this standard.

ARI, as a manufacturers' trade association, uses its best efforts to develop standards employing state-of-the-art and accepted industry practices. However, ARI does not certify or guarantee safety of any products, components or systems designed, tested, rated, installed or operated in accordance with these standards or that any test conducted under its standards will be non-hazardous or free from risk.

NOTE:

This standard supersedes ARI Standard 680-86

TABLE OF CONTENTS

PART	PAGE
Section 1. Purpose	1
Section 2. Scope	1
Section 3. Definitions	1
Section 4. Classifications	2
Section 5. Standard Equipment	2
Section 6. Testing Requirements	2
Section 7. Rating Requirements	3
Section 8. Performance Requirements	4
Section 9. Nameplate Data	4
Section 10. Voluntary Conformance	4

APPENDIX A

Method of Testing for Ozone Concentration for Group RIII Air Filter Devices

Section A1. Purpose	5
Section A2. Scope	5
Section A3. Instrumentation and Facilities	5
Section A4. Test Procedures	5
Section A5. Ozone Calculation	6

RESIDENTIAL AIR FILTER EQUIPMENT

Section 1. Purpose

1.1 Purpose. The purpose of this standard is to establish for residential air filter devices: definitions and classifications; requirements for testing and rating; a specification of what constitutes standard equipment; performance requirements; proper marking; conformance conditions; and literature and advertising requirements.

1.1.1 This standard is intended for the guidance of the industry, including manufacturers, engineers, distributors, installers, contractors and users.

1.2 Review and Amendment. This standard is subject to review and amendment as the technology advances.

Section 2. Scope

2.1 Scope. This standard applies to factory-made residential air filter devices and air filter media, as used in such devices, for removing particulate matter, when used in environmental conditioning of inhabited spaces.

2.2 Exclusions.

2.2.1 This standard is not intended to apply to HEPA filters.

2.2.2 This standard does not apply to air filter devices and air filter media for removing particulate matter, when used in industrial or commercial processes not associated with environmental conditioning of inhabited space.

2.2.3 This standard does not apply to air filter devices when used in removing abnormally high concentrations of specific contaminants.

2.2.4 This standard does not apply to appliances which include an air filter device in combination with fans, coils, dampers, etc., but can be applied to the air filter device as used therein.

2.2.5 This standard does not apply to commercial and industrial air filter equipment defined in ARI Standard 850-93 for *Commercial and Industrial Air Filter Equipment*.

Section 3. Definitions

3.1 Air Filter Device. The air cleaning equipment used for removing particulate matter.

3.2 Air Filter Media (Medium). That part of the device which is the actual particulate removing agent. In the case of Group RIII devices (See 4.1), the terms charging section and/or collecting section shall be used.

3.3 HEPA Filter (High Efficiency Particulate Air). A disposable extended media dry-type filter in a rigid frame having minimum particle-collection efficiency of 99.97 percent for 0.3 micron thermally-generated dioctyl phthalate (DOP) particles (as measured in accordance with MIL-STD 282).

3.4 Support. The means necessary to support the air filter media in the air stream and to prevent air by-pass and/or breaching under maximum rated operating conditions.

3.5 Sealing Means. Edge seals to prevent air by-pass under maximum rated operating conditions.

3.6 Renewal and/or Cleaning Means. An integral means for advancing, renewing or cleaning the media or any combination thereof.

3.7 Standard Equipment. The minimum assembly of components required to qualify a device within one of the classification groups.

3.8 "Shall," "Should," "Recommended," or "It Is Recommended." "Shall," "should," "recommended," or "it is recommended" shall be interpreted as follow:

3.8.1 Shall. Where "shall" or "shall not" is used for a provision specified, that provision is mandatory if compliance with the standard is claimed.

3.8.2 Should, Recommended, or It is Recommended. "Should," "recommended," or "it is recommended" is used to indicate provisions which are not mandatory but which are desirable as good practice.