



AEROSPACE STANDARD

AS8048™**REV. A**

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Stabilized	2021-09

Superseding AS8048

Performance Standard for Passenger Smoke and Toxic Fumes Respiratory Protective Equipment

RATIONALE

There are no known protective breathing devices that meet the requirements of this document, nor are there any FAA requirements that mandate the airlines provide this type of equipment.

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This document has been declared "Stabilized" by the SAE A-10 Aircraft Oxygen Equipment Committee and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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Documents

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1. SCOPE

This SAE Aerospace Standard (AS) defines the performance requirements for equipment to be used by untrained cabin occupants for protection from toxic and irritant atmospheres while on board and during evacuation of an aircraft.

1.1 Purpose

This standard establishes the minimum requirements for the design, construction and performance of respiratory protective equipment for passengers in civil commercial aircraft.

1.2 Classification

This equipment is required to protect and to be suitable for use by passenger/cabin occupants during the following scenarios:

Class 1: Emergency ground evacuation of an aircraft during smoke/toxic fume conditions. The required protection shall be provided for a minimum of 3 minutes.

Class 2: In-flight smoke/toxic fume conditions at normal cabin pressure up to 10,000-ft equivalent cabin altitudes. The required protection shall be provided for a minimum of 17 minutes.

Class 3: In-flight smoke/toxic fume conditions [as per Class 2] followed by an emergency ground evacuation of the aircraft [as per Class 1]. The required protection shall be provided for a minimum of 20 minutes.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the issue or revision date of this document. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

ARP1109	Dynamic Testing Systems for Oxygen Breathing Equipment
ARP4259	Metabolic Simulator Testing for Aviation Breathing Equipment
AS8010	Aviators Breathing Oxygen Purity Standard
AS8031	Personal Protective Devices for Toxic and Irritating Atmospheres
AS8047	Performance Standard for Cabin Crew Portable Protective Breathing Equipment for Use During Aircraft Emergencies

2.1.2 FAR and FAA Publications

Available from Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591, Tel: 866-835-5322, www.faa.gov.

FAR PART 25 Airworthiness Standards: Transport Category Airplanes

TSO-C116 Crew Protective Equipment

2.1.3 RTCA Publications

Available from RTCA, Inc., 1828 L Street, NW, Suite 805, Washington, DC 20036, Tel: 202-833-9339, www.rtca.org.

RTCA/DO-160 Environmental Conditions and Test Procedures for Airborne Equipment

2.2 Definitions

ATPD: Ambient Temperature and Pressure Dry

NTPD: Normal Temperature and Pressure Dry (21 °C and 760 mm Hg)

STPD: Standard Temperature and Pressure Dry (0 °C and 760 mm Hg)

BTPS: Body Temperature and Pressure Saturation (37 °C and 760 mm Hg)

POINT OF MINIMUM FLOW: Specific time during the course of the device test at which gas flow is lowest.