

AEROSPACE RECOMMENDED PRACTICE

SAE ARP1146C

Issued 1970-07
Revised 1991-02
Cancelled 2008-01

Superseding ARP1146B

Combination Evacuation Slide/Raft - Civil Air Transport

RATIONALE

During the SAE S-9A Spring 2007 meeting, a drafted document was ready to be presented to convert the ARP to an AS. However, it was agreed that there is no immediate need or desire to change the FAA TSO requirements for slide/rafts (Ref: FAA TSO-C69c). There is also no formal request from the FAA to have SAE develop an evacuation slide/raft Aerospace Standard (AS). Therefore, it was agreed that work on the AS has been suspended. In the future, the FAA requests that a slide/raft AS be developed, work on this document will resume. Since the FAA TSO-C69c is believed to adequately address slide/raft requirements and that any future slide/raft AS will be based on requirements in TSO-C69c, it was agreed that there is no need to maintain ARP1146 (Combination Evacuation Slide/Rafts). Therefore, it was decided at the SAE S-9A Fall 2007 meeting that ARP1146 will be posted for a cancellation ballot.

CANCELLATION NOTICE

This document has been declared "CANCELLED" as of January 2008. By this action, this document will remain listed in the Numerical Section of the Aerospace Standards Index.

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1. SCOPE:

- 1.1 This Aerospace Recommended Practice (ARP) is to establish criteria for design and installation of combination evacuation slide/raft devices for use both as ground and water escape devices in the event of emergency.

NOTE: This document is not intended to specify design methods, mechanisms, or equipment to be used in accomplishment of the objectives set forth herein.

2. REFERENCES:

2.1 Applicable Documents:

The following publications form a part of this specification 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 date of the purchase order.

SAE ARP495	Passenger Evacuation Devices – Civil Air Transport
SAE ARP496	Stowage of Cabin Emergency Flotation Equipment
SAE ARP503	Emergency Evacuation Illumination
SAE ARP577	Emergency Placarding – Internal and External
SAE ARP1282	Survival Kit – Liferafts and Slide/Rafts
SAE ARP1356	Liferafts

MIL-T-16396 Military Standard, Textiles

Federal Test Method Standard No. 191, Method 5136 and 5970

3. TECHNICAL REQUIREMENTS:

3.1 General:

- 3.1.1 The passenger evacuation device, including any inflation system it may be provided with, shall be capable of functioning at all temperatures throughout the temperature range of -40 to +160°F (-40 to +70°C) after a temperature exposure for 24 h or until thermal equilibrium is achieved within the stowed device.

In addition, if the device is intended to be stowed outside the pressurized cabin, the device must be capable of being stowed at -65°F without damage.

- 3.1.2 Materials and processes used in the construction of the evacuation device shall be resistant to flame (self-extinguishing), ozone, fungus, blocking and air holding deterioration.¹ Exposure to salt spray, sand and dust and spillage of beverages, aircraft cleaning agents, jet engine fuel, and hydraulic fluid shall not impair the operation and use of the device.
- 3.1.3 The device shall be so constructed that resistance to degradation from ultraviolet radiation is provided.
- 3.1.4 The evacuation device and its fastening shall be so constructed that static electricity will not be generated in sufficient quantity to cause a spark, which could ignite a fuel/air mixture. The surface resistivity of any sliding surface shall not exceed 1 mΩ when measured on any square sample not less than 5 in (12.7 cm²).
- 3.1.5 The device shall be installed in such a manner that in the event of any emergency, it will be available for immediate deployment.
- 3.1.6 The device shall be capable of providing for the evacuation rate consistent with the maximum flow potential of the exit.
- 3.1.7 The device shall have a minimum of two independent air holding chambers each designed to function and provide support in both the evacuation slide and raft modes with one chamber deflated.
- 3.1.8 The device shall be capable of being actuated by untrained evacuees. The method of operation shall be conspicuously and clearly indicated by brief instruction placards. Placards and emergency lighting shall be in conformity with ARP577 and ARP503, respectively.
- 3.1.9 If the evacuation device is equipped with pressure relief, it shall be set at an acceptable pressure to ensure satisfactory operation.

¹For test methods refer to Appendix A.