



ANSI E1.23 – 2020
Entertainment Technology—Design, Execution, and
Maintenance of Atmospheric Effects

Approved by the ANSI Board of Standards Review on 1 April 2020

Document number F&S/2002-3014r19

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Published by:

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Memorial donor: The Estate of Ken Vannice

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Interest categories:

CP	Custom-market producer	DE	Designer
DR	Dealer or rental company	G	General interest
MP	Mass-market producer	U	User

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1 General

1.1 Scope

This Standard is intended to be applicable to the creation of Atmospheric Effects using artificial fogs or mists in theatres, motion picture studios, arenas, and other places of entertainment, public assembly, or video production.

The Atmospheric Effects covered by this Standard are aerosols created using one or more of the following liquids:

Name	Chemical Abstracts Service (CAS) #
triethylene glycol	112-27-6
monopropylene glycol (propylene glycol; 1,2-propanediol)	57-55-6
diethylene glycol	111-46-6
dipropylene glycol	25265-71-8, 106-62-7, 110-98-5, 108-61-2
1,2-butylene glycol (1,2-butanediol)	584-03-2
1,3-butylene glycol (1,3-butanediol)	107-88-0
glycerin (glycerol; 1,2,3- propanetriol)	56-81-5
white mineral oil, medicinal or food grade	8042-47-5
polyethylene glycol 200 to 400	25322-68-3
water	07732-18-5
nitrogen, liquefied (LN2, L-N2)	7727-37-9
oxygen, liquefied (LOX)	80937-33-3
carbon dioxide, liquefied (LCO2, L-CO2)	124-38-9

The aerosols within the scope of this Standard are injected directly into the environment or are carried out of the fog generating equipment on a stream of ambient air, or a stream of nitrogen, argon, carbon dioxide, or a mixture of nitrogen and oxygen that approximates the composition of normal air. The Chemical Abstracts Service registry numbers for the gases that may be used as vehicles for the aerosols within the scope of this Standard are as follows:

Name	CAS #
oxygen	7782-44-7
nitrogen	7727-37-9
argon	7440-37-1
carbon dioxide	124-38-9

This Standard is not offered as guidance in planning or executing any Atmospheric Effect that uses a liquid or gas not listed above.

1.2 Purpose

The purpose of this Standard is to offer Atmospheric Effects creators and operators guidance in the planning, execution, and maintenance of theatrical Atmospheric Effects so that the health and comfort of workers and spectators shall not be compromised by excessive exposure to chemicals and particulates that are the result of the use of such theatrical Atmospheric Effects. The Standard is also intended to provide guidance related to the obscuration of hazards or paths of egress in places where the Atmospheric Effect is used. In addition, the Standard is intended to help avoid accidental triggering of fire detection and notification systems, while preserving the required functioning of the systems.

The planning, execution, and maintenance of Atmospheric Effects outlined in this Standard is a reiterative process. The process is not finished until the Atmospheric Effect is removed from the production or event, or the production or event ceases to be performed.

Annex A contains information material with clause numbers keyed to the relevant main clauses. Main clauses for which there is a corresponding Annex A clause with substantive information are indicated with an asterisk “*”.