

FED. SUPPLY CLASS

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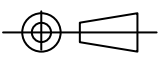
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① Completely Revised

The initial release of this document supersedes MIL-STD-1312-1. Designation for this test method remains MIL-STD-1312-1.

THIRD ANGLE PROJECTION		CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 1
PROCUREMENT SPECIFICATION NONE	TITLE FASTENER TEST METHODS METHOD 1 – SALT SPRAY		CLASSIFICATION STANDARD PRACTICE NAS 1312-1



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1. SCOPE

1.1. **Applicability.** This standard sets forth a standard test method to simulate highly humid and salt atmospheric conditions to determine a fastener's relative resistance to corrosion. The designation for this test method remains MIL-STD-1312-1.

2. REFERENCED DOCUMENTS. Not applicable.

3. DEFINITIONS. Not applicable.

4. GENERAL REQUIREMENTS

4.1. **Test apparatus.** Test apparatus used in the salt spray test shall include the following:

- Exposure chamber with racks for supporting specimens.
- Salt solution reservoir.
- Means for atomizing salt solution, including suitable nozzles and compressed air supply.
- Means for heating the exposure chamber and controlling its temperature.
- Means for cleaning the air and humidifying it at a temperature above that of the exposure chamber.

4.1.1 **Exposure chamber.** The chamber and all accessories shall be made of material such as glass, hard rubber, plastic, or suitably coated wood that will not affect the corrosiveness of the fog. In addition, all parts that come in contact with test specimens shall be made of materials that will not cause galvanic or electrolytic corrosion. The chamber and accessories shall be constructed and arranged as follows:

- There shall be no direct impinging of the spray, or dripping of the condensate on the specimens.
- The spray shall circulate freely about all specimens to the same degree.
- No liquid, which has entered the exposure chamber and has come into contact with the test specimens, shall return to the salt solution reservoir.
- The chamber shall be properly vented.

4.1.2 **Atomizers.** The atomizer(s) used shall be of such design and construction as to produce a finely divided, wet, dense fog.

4.1.3. **Air supply.** The compressed air entering the atomizer(s) shall be essentially free of all impurities, such as oil and dirt. Means shall be provided to humidify and warm the compressed air as required to meet the operating conditions. The air pressure shall be suitable to produce a finely divided, dense fog with the atomizer(s) used. To avoid any substantial difference between the salt concentration in the fog particles and that of the salt solution before atomization, the atomizing air must have a relative humidity between 95 percent and 98 percent. Thus, it is necessary to saturate the air at a higher temperature and cool it to 95 °F (35 °C) in the chamber. A satisfactory method is to pass the air in very fine bubbles through a tower containing water maintained at the proper temperature. Temperatures usually found to be satisfactory for various values of air pressure are given in Table I.

TABLE I—Air pressure and temperature range

Air pressure (lb/in ²)	Temperature	
	°F	°C
12	114	46
14	117	47
16	119	48
18	121	49

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NAS1312-1

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