INCH-POUND

MIL-PRF-26536E
AMENDMENT 1
10 January 2000

PERFORMANCE SPECIFICATION

PROPELLANT, HYDRAZINE

This amendment forms a part of MIL-PRF-26536E, dated 24 September 1997, and is approved for use by the Departments and Agencies of the Department of Defense.

The attached insertable replacement page listed below is a replacement for the stipulated page. When the new page has been entered in the document, insert the amendment as the cover sheet to the specification.

NEW PAGE	DATE	SUPERSEDED PAGE	DATE
3	10 January 2000	3	24 September 1997
4	24 September 1997	4	Reprinted without change

Custodians
Navy - AS
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Civil Agency
NASA

(Project 9135-0159)

AMSC N/A

FSC 9135

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

3.3 Filter.

3.3.1 Standard grade. A filter with a 10-micrometer nominal and 40-micrometer absolute rating shall be installed between the manufacturer's plant system and the container to be filled for delivery.

3.3.2 Monopropellant and high purity grades. A filter with a 2-micrometer nominal and 10-micrometer absolute rating shall be installed between the manufacturer's plant system and the container to be filled for delivery.

3.4 Qualitative. The propellant shall be colorless, homogeneous liquid when examined visually by transmitted light.

TABLE I. Chemical and physical properties.

Properties	Limits			
	Standard grade	Monopropellant grade	High purity grade	Test paragraph
Hydrazine (% by wt)	98 min	98.5 min	99.0 min	4.3.2
Water (% by wt)	1.5 max	1.0 max	1.0[1] max	4.3.2
Ammonia (% by wt)	---	---	0.3 max	4.3.2
Particulate (mg/L)	10 max	1.0 max	1.0 max	4.3.3
Chloride (% by wt)	---	0.0005 max	0.0005 max	4.3.4
Aniline (% by wt)	---	0.50 max	0.003 max	4.3.5
Iron (% by wt)	---	0.002 max	0.0004 max	4.3.6
Nonvolatile residue (% by wt)	---	0.005 max	0.001 max	4.3.7
Carbon dioxide (% by wt)	---	0.003 max	0.003 max	4.3.8
Other volatile carbonaceous material (Total as MMH & UDMH, Alcohol, % by wt)	---	0.02 max	0.005 max	4.3.9

[1]High purity grade is available with a range of 0.5 to 1.0% water upon request.

4. VERIFICATION

4.1 Classification of inspections. The inspections shall be classified as quality conformance inspections.

4.2 Quality conformance inspection. The quality conformance inspection shall consist of the following:

a. Individual tests 4.2.1

b. Sampling tests 4.2.2

4.2.1 Individual tests. The propellant shall be subjected to the following test as described under 4.3:

Examination of product 4.3.1

4.2.2 Sampling tests. The propellant shall be selected according to 4.2.2.1 and subjected to the tests indicated in Table I as described under 4.3.

4.2.2.1 Sampling plan. Unless otherwise specified (6.2), each filled shipping container shall be considered a lot and shall be sampled.

4.2.2.1.2 Sample. A sample consists of not less than 600 mL of propellant when tested to standard grade requirements and not less than 1500 mL when tested to monopropellant and high purity grade requirements. Unless otherwise specified, quality conformance tests shall be made on the sample of propellant taken directly from the shipping container. When required, the sample shall be forwarded to a laboratory designated by the procuring activity for subjection to the quality conformance tests specified herein. The bottle intended for sampling shall be specially cleaned and handled according to the procedure described in 4.3.3. Sampling shall be conducted in such a manner that atmospheric exposure of the contents of the shipping container and the sample is minimized.

4.2.3 Rejection. When any sample of the propellant tested in accordance with 4.3 fails to conform to the requirements specified herein, the entire lot represented by the sample shall be rejected.

4.3 Test methods.

4.3.1 Examination of product. The propellant shall be visually examined while performing test specified in 4.3.3 to determine compliance with the requirement as specified herein. Examination to ensure that the material conforms to 3.4 shall be conducted after the sample has been transferred to the 500 mL calibrated cylinder for standard grade or to a 1000 mL graduated cylinder for monopropellant and high purity grades.

4.3.2 Hydrazine assay and water. The propellant and water content of the sample shall be determined by the following method.

4.3.2.1 Gas chromatographic method.

4.3.2.1.1 Assay column preparation. Cap one end of a 1/8 inch OD by 6-foot nickel tube and fill the tube with the Tenax GC column packing by pouring through a small funnel attached to the other end. Tap or mechanically vibrate the tube to ensure uniform packing. When the tube is filled, plug both ends with a small wad of glass wool, bend the column to the configuration required by the column oven, and connect the column to the inlet fitting in the oven. Condition the column with carrier gas flowing and the oven set at 200°C for one hour. After conditioning the column, connect the other end to the detector and set the carrier gas flow to approximately 25 mL/min, and the column oven to 50°C. The inlet and detector temperatures, if separately heated, shall be set to 100°C and 150°C, respectively. The detector current should be set to a nominal sensitivity value recommended for helium by the instrument manufacturer. The column temperature and carrier gas flow may be